613 E 75-17 (3)
(2)
455 P
469

ALCOHOL — See Ethyl Alcohol
Sedative Deprivations

ALTERATIONS — See Deprivations

AMANITA — See Fungus Toxins
Muscaria
Pantherina
Phalloides

AMMONIUM — See Tetraethylammonium

A/C I 75-10

ACETYLCHOLIN & CHOLINESTERASE

The constantly changing balances between these substances at innumerable points in the body, relate to the transmission of all nerve impulses. "Cholinergic" and "Adrenergic" drugs throw the balance in one direction, or the other. "Ganglion-block" drugs have special relationships. See Nerve Gases also.

Because of the overall importance in neurology and psychiatry, any psychiatric project needs to keep track of the literature on Acetylcholin & Cholinesterase.

A/BE 75-13

AMNESIA

One of the questions most commonly asked of A is, "Can you guarantee amnesia?" This, of course, is a very logical question and its answer--if it could be given in the affirmative would be of extreme importance in many types of operations as well as in A use. At present, however, we do not know of any technique, chemical, treatment, etc. which will guarantee complete amnesia. A is very interested in this problem but to date our research and experimentation is disappointing.

In hypnosis, certain of our good subjects have, with some degree of consistency, had amnesias but the same subjects in other tests have had recall even after the strongest suggestions were made for amnesia. It appears that under hypnosis, even if a complete amnesia cannot be obtained a blurred or fuzzy memory can be, induced and a partial amnesia is often obtained. Some subjects seem to experience memory blank when placed in deep hypnotic states without efforts being made to produce an amnesia--but this too is not consistent.

Certain chemicals seem effective. Scopolamine, for instance, comes closer than the barbiturates although we have apparently produced good amnesias with amytal and pentothal. Some new chemicals may be valuable along these lines (LSD). However, our professional consultants emphatically support the A view that short of cutting a subject's throat, a true ~~confession~~ amnesia cannot be guaranteed.

It should be recalled also that most drugs leave a tell tale "hangover" with the subject and while he may be very vague as to what has occurred, he nevertheless will realize that something "unusual" has happened to him. Such chemicals as LSD, mescaline etc. having weird and bizarre effects in heavy dosages clearly indicate something has been done to the individual. Particularly sensitive to drugging, of course, would be

good intelligence agents since drug effects are known by all the nations of the world and we believe are very well known by the Soviets.

The A group has considered shock--both electro and chemically-induced as an amnesia-producing technique but even in this results are spotty and medical authorities are certainly not in agreement. This, coupled with the dangers involved, the clumsy apparatus necessary and the medical problems present more or less rule out shock for our use.

The A group would recommend this for research.

A/B I 25-14

Amnesia for words mentioned in the hypnotic state was suggested to a somnambule. Despite subject's inability to recognize or recall these words in the posthypnotic period, they could be determined from records of physiological changes which were made (polygraph) during the tests of recognition.

Bitterman & Marcuse
(Cornell)

RF/BE 20-15

AMPHETAMINE

See Narco-Analysis, and Narcotizing Drug Combinations.

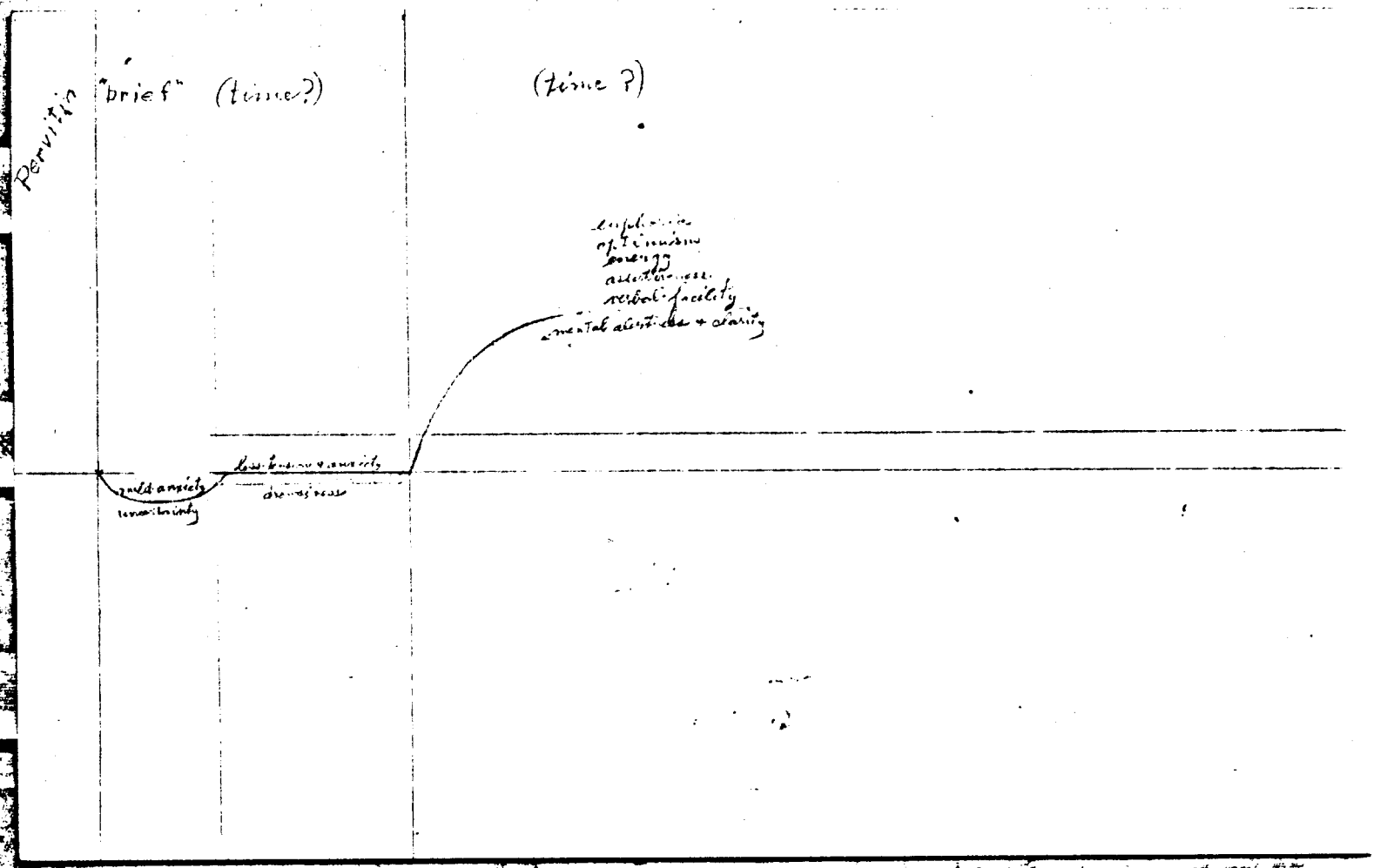
Of the several in use, the best for Narco-Analysis, either alone or for partially arousing the S. from a drug-induced sleep, are the two: Methedrin or Pervitin, and Dexedrin. Methedrin may be slightly more powerful. Either can be given orally or intravenously. If I.V., then it may be wise to try a small dose first before using an average dose. Some persons are sensitive enough to be convulsed on an average intravenous dose; anyone's convulsive threshold will be lowered. There are reports of an acute psychosis being caused by an intravenous overdose of Methedrin.

The convulsive threshold may be lowered enough to produce convulsion on exposure to Flicker, but the behavior of amphetamines is more erratic in this connection than is that of intravenous Azezol, or Metrazol.

One unsettled question here is: could enough Benzedrin (another amphetamin, more volatile) be inhaled to produce a certain Flicker-convulsion, without producing too much other effect, chiefly too high a blood-pressure? The answer seems to be "No".

Further study of these Amphetamins is recommended.

Pervitin is said to have a marked objective sobering effect on alcoholic intoxication.


pervitin
"brief" (time?)
(time ?)
cold anxiety
drowsiness

A/BE 75-16

AMYGDALOID NUCLEUS

At present this brain-center can be specifically stimulated by a current passed through wires inserted through the brain by operation.

Such a procedure is obviously useless to this project; but ultrasonics or other means of radiant energy may yet be improved or modified so that a "cross-fire" (as with X-rays) arrangement could be focussed on a selected small region in the brain without affecting the surrounding areas.

The Amygdaloid nucleus is interesting because it has been stimulated in humans (as in first paragraph above); producing fear or anger. Monkeys' amygdaloids have been removed; producing tameness.

Temporary inhibition of this region (possibly also of others), should tame humans.

A/B-E 75-14

ANALGESIC DRUGS

B C recently stated that a new era in medicine was about to begin. He was referring to new drugs such as DOLITRONE which are capable of obliterating pain without removing consciousness. Whether or not these new drugs may be of value to ARTICHOKE remains to be seen but theoretically at least they are of interest to us both offensively and defensively.

Many questions arise in considering these drugs:

1) Is there a dissociation between feeling and thinking?
2) Is there a tendency toward euphoria?
3) Is amnesia developed (some indication here)?
4) Could it serve as a defense against torture?
5) Would these drugs have any form of potentiating effect?
6) Could they be used as a confusion agent? After--or combined with other chemicals.

A A B C G Note: DOLITRONE was obtained as a result of a trip by in October 1954 and turned over to for research. (Dolitrone came from

See DOLITRONE

A

A/BE 75-18

ANESTHETIC GASES

Patients going under and coming out of surgical anesthesia are notorious for revealing material otherwise concealed.

ETHER is too easily inflammable and explosive, for one objection. There are also other Ethers than the common one, that are faster — but likewise inflammable. This drug I would forget.

NITROUS OXID or "laughing gas" may cause uncontrollable laughing, or else weeping, for a good part of an hour after recovery of consciousness. Not enough usefulness to us. This too can be forgotten.

CHLOROFORM is worth remembering. A good deal of literature-searching might be required, but a cleared contact told us of an American Civil War case of an agent being questioned under Chloroform with remarkable success. It may be that other drugs could advantageously be added to Chloroform, while keeping its dose small because it can be fairly toxic to the liver.

A/BI 75-19

ANIMAL TOXINS

1. Paralyzing toxins in the flesh of certain fishes, and shellfish (mussels especially), produce numerous well known neurological effects. Psychological effects, if any, have not been emphasized. The literature deserves more study than this reporter has given it.

2. Toxins in the sting of most insects, seem of little or no interest. Again, the literature on black widow and other spiders, scorpions, etc., has not been closely searched.

3. Snake venoms (as cobra & rattlesnake) are most interesting, and have been used by injection:

   (a) to reduce chronic pain; and

   (b) to relieve symptoms of epilepsy.

These uses are not well or generally accepted medically; but they do suggest that further study of the literature may well bring out something of value.

We are checking animal toxins at present. results to date are disappointing

A/BE 75-20

ANTI-HISTAMINICS

Anti-histaminic drugs such as Anahist, Benadryl and Pyribenzamine have two possibly useful properties.

1. They cause emotional instability in children; less so in adults, therefore some experimentation would be required to select the most generally disturbing one. Probably there is too little to be gained in this direction exclusively, but the other (doubtless related) property is more promising:

2. They sensitize a Subject to alcohol. People become intoxicated sooner and nearer semiconsciousness with less alcohol. (A patient of mine fell asleep and fell down while climbing a stairway; it is notorious that persons under both drugs' influence may fall asleep suddenly if attempting to drive).

This condition seems well worth further study.

Antimetabolites

(see also Deprivations, p. 2)

Many of these substances are known, each one of which is specifically antagonistic to the action of a certain enzyme, hormone, etc.

E.g., the antimetabolite "desoxypyridoxin" counteracts the vitamin pyridoxin (B_6) and so sensitizes the subject to convulsion; thereupon, a means intended to produce a convulsion will do so on shorter exposure and/or in smaller dose. If pyridoxin is counteracted rapidly and completely enough, a convulsion may be produced.

An antimetabolite to glutamin (glutamic acid, an amino-acid essential to human health) would likewise sensitize to convulsion; or produce one, if glutamin were counteracted rapidly and completely enough.

A diet naturally low in B_6 could be fed, and drugged with the above autimetabolites.

It is also possible that edibles could be grown, under radioactivity, to contain less B_6 than normally.

Research in experimentation along these lines is not worth the project's effort; but the literature merits an occasional survey.

A/BI 75-22

ASPIRIN

Recently a report has appeared that ascribes some Cortisone-effect to Aspirin. Aspirin is such a commonly used drug, and this property (if true) so promptly suggests that combinations of Aspirin with other drugs that we use may possibly distort their effects: a sharp eye should be directed at whatever further reports appear in this connection.

A/BE 75-23

ATMOSPHERIC PRESSURE

Low.

Low oxygen (12% to 11%, i.e., about half-normal) for respiration has desirable effects (#4): exhilaration, talkativeness, & over-confidence; but with poor memory and comprehension, also headache and nausea, and pugnacity.

A severe oxygen deprivation -- 6% O_2 + 94% N_2 -- produces unconsciousness gradually.

High.

Pure (100%) oxygen breathed can produce unconsciousness promptly, but this procedure is dangerous.

Both. Measurable alteration in either direction, of the O_2 for respiration, would require an oxygen-chamber type of installation. This seems not worthwhile.

Also: a means to protect the Operator from the same symptoms as the subject's, is not available.

A/B E 75-24

ATROPIN

See Narcotizing Drug Combinations.

Atropin is a belladonna derivative, used sometimes in place of, or in addition to, Scopolamin in a Scopolamin + Morphin technique ("twilight sleep").

Atropin is also an antidote, but not a good one, to the "nerve gases."

A/BI 75-25

AZOZAL

See METRAZOL
FLICKER

A/BL 75-24

BACTERIAL TOXINS

Few if any bacterial toxins seem to lend themselves to the project's aims.

Botulinum toxin may have possibilities. This reporter has read too little, to say more than that its literature deserves a survey.

A/BE 75-27

BARBITURATES See Ethyl Alcohol
Sedative-Deprivations
Unwitting Subject
Narco Analysis

BLOOD ELECTROLYTES SeeElectrolytes

BLOOD POTASSIUM See Potassium

BRAIN CENTERS See Amygdaloid Nucleus
Frontal Lobe
Iontophoresis
LSD-25
Lobotomy
Radiant Energy
Ultrasonics

A/BE 75-28

BRAIN-WASHING

Isolation as a means applied over an extended time, within a program of Brain-Washing, produces a Mental State of apathy and purposelessness (a #14). Whether isolation produces suggestibility (#6) when combined with other brainwashing techniques, is uncertain; a special form (see Isolation) does sometimes produce suggestibility.

Other elements of brainwashing may produce some confusion (#8); and a tendency too readily to fall asleep (#10). See next page.

Overall, brainwashing has the medium- or long-term objective of weakening or eradicating a Subject's philosophy of life and his drive to pursue it, along with his allegiance and the motivation to maintain it.

A Mental State of degradation (#14) may then improve the product of interrogation, by removing the Subject's motivation to conceal. However, in a short-term preparation for interrogation, degradation could do more harm than good.

First steps in brainwashing are deprivations:

BRAIN-WASHING

DEPRIVATIONS OF:		PRODUCE:
Sleep;	discomfort & frequent awakening	tendency to confusion (# 9) & chronic drowsiness (#10)
Warmth;	exposure to distressing cold	
Food — quantity	chronic hunger & mild starvation	tendency to drowsiness (#10)
Food components	deficient proteins, vitamins, minerals, &c	ill defined "sub-clinical" Dental States
	(Deprivations of Vitamins C, B_1, B_2, are usually not enough to produce	scurvy, beri-beri, pellagra)
	If DEGRADATION is included, add	
DEPRIVATION OF:		
Dignity;	dirt, discomfort, humiliation, threats, abuse & beatings	tendency to violence & defeatism, with no outlet for hostility; hence only defeatism remains (a #14)

BRAIN-WASHING

See also: Vitamins
Electrolytes
Anti-metabolites

Deprivations

A/BL 75-29

BUFOTENIN

This substance has been synthesized, and is the equivalent of the narcotic principle of Cohoba Snuff, used in the Antilles somewhat like Peyote in North America.

Study of this drug is recommended.

4/BE 75-30

BULBOCAPNIN

This drug is best known for its property of producing a cataleptic state, like catatonic schizophrenia in some respects, but only temporary. This state is abolished by cocain, or an amphetamin; rapidly, if either of these antidotes is injected; even more rapidly if a mixture of 40% CO_2 + 60% O_2 is inhaled.

A smaller dose of bulbocapnin produces Under-Anxiety (col. #1), a state of tranquillity which may include some degree of suggestibility.

Use of this drug in interrogation is well worth further study, both alone and in combination.

A/B C 75-37

CARBON DIOXID

Most of the current medical literature on CO_2 in treatment of psychiatric conditions, describes methods that give 30% CO_2 + 70% O_2, or 40 : 60 respectively, through a face-mask. Unconsciousness comes rather quickly, but there is much anxiety (without amnesia after awakening) involved, as well as apparatus and an anesthetist's skill.

There seems to be no future for this method, in Interrogation.

Small concentrations are much more promising. While an oxygen-chamber type of room would be desirable, it might not be necessary. The driver of an ordinary station-wagon fell asleep gradually on driving a few blocks, after storing 100 lb. dry ice in the car, which had been standing in the sun. Under laboratory conditions, as low a concentration as 6% CO_2 causes headache and confusion; how long it would take to produce unconsciousness, is uncertain. Eventually, as the S. breathes he increases the CO_2 concentration, which complicates the problem. Also eventually, he ceases to breathe, and it will take artificial respiration for recovery. The safety margin at various ranges of concentration, must be determined.

This reporter guesses that he has not sufficiently searched the literature, and that already enough has been worked out to give CO_2 a place in our program. If a room were only relatively tight, the amount of dry ice to be sublimed to provide a given concentration of CO_2 in a given cubic yardage, should be readily calculable; the Subject's breathing might maintain or increase the concentration gradually. He might well become unconscious without being alarmed. More difficult would be the problem of how to keep the Operator alert at the same time: no answer to this, at the moment.

See Unwitting Subject (top of page 1)

A/BI 75-3/a

CA (Calcium)	See Electrolytes Prophylaxis against Revealing
CAFFEIN	See Ethyl Alcohol
CALCIUM	See Ca (above)
CANNABIS	See Unwitting Subject

4/13 E 75-32

CARDIAZOL

See Metrazol

BE 75-33

CAROTID SINUS PRESSURE

Sudden strong pressure on certain small areas on either side of the neck under the lower jaw, will alter the bloodsupply to parts of the brain and may cause fainting; in a few subjects, it may cause a convulsion.

In highly susceptible subjects, a constant (not sudden) milder pressure from too tight a collar, can produce similar results.

While it is true that this carotid-sinus-reflex can be sharpened, or dulled, by one or another drug, research on this topic has not seemed to promise enough return.

Our purpose does not contemplate judo-techniques among its ordinary means.

The so-called carotid artery technique in H does not appear at all suitable. Unconsciousness will not necessarily aid H and truly unconscious only is useless. Too rough, uncertain — not suitable

A/B E 75-34

CENTERS, BRAIN

See Brain Centers

Changes in Temperature

See Heat
Cold

Chemical Lobotomy

See Chloropromazine
Cocain
Lobotomy

CHLORAL

H/BE 75-35

Chloral, as knockout drops or Mickey Finn, has a better reputation for clandestine than for the medical production of sleep. In medicine it was deemed riskier for the heart than any barbiturate; but at this year's (1954) Amer. Psychiatric Assn. convention it had a renewed vogue. Two commercial firms, Squibb and Fellows, were there advertising preparations of Chloral for sleep-producing.

In a Subject already alcoholized it is doubtless more potent and quicker-acting than when given alone.

See: Unwitting Subject (page 1)
Narcotic Drug Combinations (item 2)
Sedative Deprivations (para. 1)

A/BE 75-36

CHLORPROMAZINE

A/B E 75-38

This drug by mouth or intramuscular injection, produces under-anxiety (col. #1), through a ganglion-blocking property. Especially it tames a violent subject; makes aggressive psychopaths less aggressive, and active paranoids less deluded.

Unlike Rauwolfia, Chlorpromazine is somewhat toxic; 2 to 3% of subjects develop a liver complication. It produces a mild non-permanent lobotomy-like effect. Subject is dulled, sometimes drowsy but not confused. Bloodpressure drops (sometimes too far for comfort) and pulse rises; this effect may alarm a neurotic subject. More details in Section 14 of my report on Amer. Psychiat. convention of 1954.

No revealing-tendency seems to have been reported. Cardiovascular effects would make polygraphy difficult to interpret.

Further study of this drug is recommended for its anxiety-reducing and possibly other properties (as further study of other ganglion-blocking drugs seems worth a mild recommendation): its deconditioning property is most interesting.

See Conditioning (foot of page).

#IBC 73-39

CHOLINESTERASE

See Nerve Gases
Acetylcholin and Cholinesterase

CO_2 — See Carbon Dioxide —

COCAIN

A/B E 75-41

Cocain's general effects have been somewhat neglected. By injection this means will produce elation, talkativeness and etc. (#4 of Mental States). Larger doses may cause fearfulness and alarming hallucinations.

It also counteracts the catatonia produced by bulbocapnin, and the catatonia of catatonic schizophrenia.

It seems worth further study.

COCAIN DERIVATIVES

Procaine injected into the brain's frontal lobes, through trephine holes in the skull, produced free and spontaneous speech within two days in mute schizophrenics.

Too surgical for our use.

However (see card on Iotophoresis) it is possible that such a drug could be gotten into the general circulation of a subject without surgery, hypodermic or feeding.

Possibility seems remote, and worth little if any further study.

COFFEE See Caffein

A/BE 75-42

COHOBA SNUFF See Bufotenin

MIB I 75-43

See Deprivations (p.3).

There are procedures for making a human hibernate like a bear, and with relative safety. Since that objective seems outside this project, I have neglected it.

[redacted]

[redacted]

[redacted]

COLORED LIGHT See Colors

A/BI 75-44

4/BE 75-45

COLORS

1. Colors notoriously influence the emotions.

2. Some impression of a Subject's personality can be gained by his choices of, and reactions to, various colors.

This reporter has neglected colors, perhaps wrongly. They may belong in this project.

3. The colored goggles used to avoid flicker-sickness in technicians and operators, are intended merely to reduce light-intensity.

Use of color - fractionally
areas painted in certain colors
and colored / flickering lights
may be worth a investigative study.
Close to this, of course, is area of
glare - very widely used

A/B I 75-46

COMBINATIONS

See Aspi:
Ethyl Alcohol
Interrupted Sound
Mescalin
Narcotizing Drug Combinations

COMBINATIONS

See Aspi
Ethyl Alcohol
Interrupted Sound
Mescalin
Narcotizing Drug Combinations

HBI 75-46

HBE 75-47

CONDITIONING (& Deconditioning)

Roughly stated, this training teaches the Subject to respond to a signal or symbol, in the same manner as he would respond to the stimulus for/the which symbol stands. Classically, Pavlov's dog's mouth waters when he hears the bell that goes with food — without the food. When food has been omitted often enough, the dog no longer responds to the signal; he is "deconditioned".

Jones learns to respond to stimuli intended for a Smith, as though he were that Smith. He has been "conditioned" to Smith, "deconditioned" to Jones.

Such trainings are integrated on all levels, conscious and subconscious. Hypnosis can assist in establishing the desired conditioned responses.

A C. R. (condit. resp.) is meant to stick. It can be interfered with, or abolished, by new training in another direction, or back to the earlier state.

Deconditioning can probably be expedited by hypnotizing procedures. Also, a C.R. can be interfered with or abolished by violent physical shocks (e.g., electric shocks to the brain; although this reporter has not found a specific electric-shock procedure that would assuredly decondition any particular kind or number of C.R.'s).

Still problematic is the use of drugs for deconditioning. Chlorpromazine (which see) ought theoretically to have some such value, and some deconditioning effect has been produced in laboratory animals. However, hospitalized patients taking daily doses of this drug seem to have been deconditioned only selectively, against certain psychotic behavior. It may be that this property is exactly what we are looking for; perhaps it could decondition an enemy agent out of his simulated personality and back to his real one.

Deconditioning possibilities demand more study, in this order: Hypn., Chlorpr., Elec.Shocks.

CONFUSION

HBI 75-48

Ethyl alcohol, barbiturates, barbiturate + amphetamin, scopolamin + morphin, and other combinations; marijuana, mescaline, LSD25: all can produce some form or degree of confusion, but are not ordinarily given for that purpose alone.

(See the individual cards for these specific chemical Means).

Confusion is better controlled during the period of recovery from, than during the period of sinking into, unconsciousness. A tendency to reveal, as well as to be confused, would be expected especially under barbiturate + amphetamin, or scopol. + morph.

Confusion is usual during recovery from an epileptiform convulsion. Its duration may be short or long, and it may be complicated by violent excitement. An especially revealing-tendency is not expected, but does appear in some subjects. (See Convulsion; Flicker; Electric Shock.)

Some confusion has been reported from electromagnetic and high frequency fields. Radar also may have confusing effects. No one of these three seems to have been used for the purpose; but a vast deal of literature is still unsearched, and deserves searching.

CONVULSIONS (Epileptic-type Fits)

A/BE 75-49

The A group has for a long time considered the possible uses of artificially induced convulsions for several interesting reasons:

a. The convulsion or fit itself, if capable of being induced at will, would be a very strong physical and psychological harrassment to any given subject particularly if used after threat, or to convince a subject of his "serious" illness.

b. The post-convulsion period is one of confusion, disorientation, weakness and often a semi-comatose condition. During this state, it is possible that a subject is more suggestible than normal and that conceivably hypnosis could be achieved in an otherwise unwilling subject. This latter is theoretical only and requires research--medical literature is unavailable in this connection.)

c. Quite often amnesia occurs for events just prior to the convulsion, during the convulsion and during the post seizure state. It is possible that hypnosis or hypnotic activity induced during the post-seizure state might be lost in amnesia. This would be very valuable.

In studying this problem, it is noted that convulsion can be produced in many ways--chemically, electronically (shock) or through flicker or interrupted sound (particularly after sensitization by certain chemicals such as Isoniacid). (Note- (unfavorable comments under Isoniazid) which of these techniques that could be used in a surreptitious manner or simply produced is at present unknown but the A group feels that this field deserves more study.

A

A

[redacted]

[redacted]

[redacted]

4/B.I 75-50

CONVULSION

See also: Sensitizing to Convulsion, Flicker, Interrupted Sound, Antimetabolites, Convulsive Threshold Lowered, Convul. Thres. Raised, Deprivations, Sedative Deprivations, Electric Shocks, Vitamin B_6, individual convulsant drugs as Metrazol, Amphetamins, etc.

CONVULSION-SENSITIZING —

A/BI 75-5-1

See Sensitizing to Convulsion
Convulsive Threshold Lowered

IBL 75-52

Convulsive Threshold Lowered

A number of means will lower the convulsive threshold/(this lowering is a mild degree of (# 9, sensitizing to convulsion).

In practical use is a drug (Metrazol or equivalent) given intravenously. Flicker, applied after this injection, is said to convulse an Subject.

Question: can a biochemical or dietary means (applied over a period of days, lower (the convulsive threshold far enough to (assure that Flicker will then convulse?

More study seems worth while.

See: Metrazol.
Cortisone.
Sensitizing to Convulsion.
Deprivations.
Potassium.
Electrolytes.
Glutamic Acid or Glutamin.

A/BC 75-53

CONVULSIVE THRESHOLD RAISED

A few reasonably normal persons will be markedly disturbed, or even convulsed, by Flicker, without having been sensitized beforehand.

Question: can a sure means be applied beforehand, to prevent a mild or serious effect of Flicker--so protecting an Operator exposed with his Subject?

More study seems worthwhile.

See: Chlorpromazine
Barbiturates

A/BI 75-54

COPRINUS ATRAMENTARIUS

See Fungus Toxins

Cf. [illegible] toxic mushrooms & fungi are being given a complete study from A [illegible] some species are being used.

A/BE 75-55

CORTISONE & A C T H

Cortisone may sensitize to convulsion, or convulse, persons who take it over a considerable period of time; it is given by physicians for a number of chronic illnesses — chiefly chronic arthritis, and chronic asthma — so that if a Subject has been taking it, his convulsive threshold may be appreciably lower than normal.

ACTH (adrenocorticotropic hormone) stimulates the body's production of Cortisone, along with some other effects. The Cortisone-effect, as above, might interest us.

Neither of these would be used actually to sensitize or to convulse, for our purposes. They would be too slow, and would involve a number of (complications) very undesirable).

7/BE 75-54

CURRENT, galvanic	See Iontophoresis
Current, high frequency	See Iontophoresis High Frequency and Radar Fields
Current, induced	See Electric Shocks Electromagnetic Field
Current, Alternating	See Electromagnetic Field Electric Shocks

A/BL:75-57

DECONDITIONING — See Conditioning

DEPRIVATION-CONVULSIONS — See Deprivations
Sedative-Deprivations

A/BE 75-8

(1

DEPRIVATIONS

See Brainwashing. See also SEDATIVE DEPRIVATIONS; &, DEPRIVATION OF FOOD, QUANTITATIVE.

Deprivations of dietary components, and Alterations of physical environments, can also be applied over a period of time (without other brainwashing stresses) to weaken a Subject non-specifically (#14), i.e., to make him more easily fatigued and to lower his resistance generally.

Specifically desirable mental states should be sought, in addition to a non-specific (#14) weakening of the Subject which would lower his resistance and make him more easily fatigued.

Mentioned under Brainwashing, is the drowsiness-tendency (#10) produced by a mild degree of starvation.

Under Sensitizing to Convulsion (page 2) is a list of biochemical and dietary means that may so act, viz.

DEPRIVATIONS Dietary Means that probably Sensitize to Convulsion (not listed in order of probable effectiveness, which is unknown)	MENTAL STATES produced (other than generally lowered resistance, raised fatiguability, & the Sensitizing-to-Convulsion)	Questions: Is it practical to alter the proportions of blood-electrolytes? by feeding as a part of the regular meals:
Bio-Chemical Low.tot.bl.electrolytes) Lowered blood-magnesium) Raised blood-potassium)	other effects unknown	a) certain salts? b) certain ion-exchange resins?
Vitamins Niacin (B_2) deficiency Pyridoxin (B_2) " Riboflavin (B_2) "	(if severe deficiency, (irritability & confusion other effects unknown " " "	c) vegetables of ordinary species, but grown in especially altered soils? d) "mutant" vegetables, i.e., new species selected from freaks grown under influence of radio-activity?
Amino-Acids Glutamin deficiency	other effects uncertain	
Antimetabolites (producing deficiency of a specific Vit. or Am.Ac)	effects, as above	Or to alter the vitamin-content of edible plants, by (c) or (d) above?

DEPRIVATIONS Dietary (continued)	MENTAL STATES produced	(3 Further study of the literature seems desirable.
(Certain vegetables show a niacin-deficiency effect; suspected, that they have like effect, though mild, on central nervous system) Parsnips)) Buckwheat)	unknown, whether any	
DEPRIVATIONS IN, or ALTERATIONS OF, the PHYSICAL ENVIRONMENT		
Reduced CO_2, in blood, as from deep breathing	(sensitizes to convulsion (& betters hypnotizability	
Reduced O_2, in air	(if mild: worsens judgment & (concentration; tends toward (elation & over-confidence (#4)	
Reduced relative humidity (if to 30% or lower)	(irritability certainly; lower- (ed convulsive thresh. probably	
Reduced body-warmth (no heating, little clothing)	(frustration, & aggravated in- (tensity of dependancy-needs	

A/BC 75-5-9

DEPRIVATION OF FOOD, QUANTITATIVE

See Brainwashing (page 2)
Deprivations (" 2)

A 12-hour fast makes subjects more liable to Flicker-Sickness (which see).

Quantitative food deprivations of different durations doubtless have numerous other effects in great variety — like making males more fertile, possibly through a ductless-gland mechanism (pituitary gland?).

The literature ought periodically to be searched to pick up dietary (quantitative & qualitative) influences that can add to, or subtract from, the effects of drugs & other means

ATBE 75-60

DEXEDRIN	See Amphetamins Unwitting Subject
DIET	See Deprivation of Food, Quantitative Deprivations Antimetabolites
DIZZINESS	See Barbiturate (see also other drugs) Equilibrium Flicker Sickness Middle Ear Disorder Motion Sickness Vibration

A/BI 75-61

DISPOSAL PROBLEMS (Disposal of Subjects) See AMNESIA
LOBOTOMY

A/BE 75-62

DOLITRONE

1. Dolitrone is a new drug. Injected intravenously, it renders a subject insensible to pain but conscious, unparalyzed, and able to follow directions.

There is no report yet of any mental state useful to interrogation. Whether some such drug could be or has been developed for oral use by an agent, as prophylaxis against third-degree methods, is unknown.

2. It is known that very rare individuals seem to be naturally insensitive to pain--not simply hardened or conditioned.

Research on the pharmacology of (1), and the pathology of (2), seems worth following.

A/BI 78-63

Dormison

This practically tasteless drug, given by mouth in dosage of 0.25 to 2.5 gm., will produce a few hours' sleep fairly rapidly. However, since the stated range of doses is so broad, it is obvious that a relatively small dose will produce sedation and not sleep in some Subjects. In intentionally small doses it reduces anxiety (col. #1).

Therefore to assure sleep, a large dose is required. This is safe (but may make S. sleep longer than intended, if it is a large dose for him), since 2.5 gm. is believed non-toxic; 5.0 gm. may be toxic.

Dormison has this advantage over barbiturates, that is does not cause a hangover as the latter sometimes do. It should not be given with barbiturates: effect is excessive.

Nothing found in the references read, to suggest that Dormison should not be given at the same time as alcohol; nor is it stated whether such a combination has other effects.

No revealing-tendency reported. To reduce anxiety, or to produce sleep — according to dose — seem to be its only uses.

See Unwitting Subject.

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See Unwitting Subject.

A/B.I 75-65

(1

ELECTRIC SHOCKS

An electric shock of high amperage (say 500 to 800 milliamperes), 60-cycle A.C., for a fraction of a second through the frontal area of a Subject's brain, can give him a sudden epileptiform convulsion. This is more violent than an ordinary epileptic fit; also, breathing ceases and may not resume spontaneously. Machines are available to deliver different types, strengths, and durations of current for psychiatric uses.

Two to four operators shock one patient, in a fairly involved procedure that includes precautions against a fatal stray current through the heart, fractures of the spine, dislocation of the jaw, burns, &c. Artificial respiration is routinely given. Fracture complications are not rare, even with a well-trained team. A previous injection of curare or an equivalent will practically eliminate the danger of broken bones, but introduces other dangers and adds another step to the procedure. If we desire an epileptiform convulsion, it ought to be less violent and complicated than that. A number of modifications are already in psychiatric use.

Modified procedures with different types of current have succeeded in avoiding most of the above complications, but the current is so painful that the Subject must be first anesthetized.

Possible advantages of electric, instead of other, means of producing convulsion with unconsciousness, are suddenness and amnesia. A high amperage electric shock to the head acts somewhat like concussion from a blow; after recovery from unconsciousness, there is a loss of memory for the convulsion and also for a period of a few seconds' or minutes' time just preceding the convulsion. If the Op. had had to give an intravenous anesthetic first, its administration will be remembered; giving a shock next, is pointless.

If the amnesia-for the-event, which the strong electric shock produces, would invariably extend backward in time far enough to keep Subject from recalling that a pair of electrodes had been clapped on his head, then we would have a highly desirable amnesia.

Since one cannot be sure of this, Electric Shocks through electrodes applied to the head, may as well be dropped.

See Electro-Narcosis. See also, Conditioning.

There is another vague possibility. Could a coil be arranged in chair or wall, so that switching it on would induce a current in Subject's head? Perhaps; but the inducing current would have to be uncommonly heavy, while the induced current would stray all over and as likely kill the S. as convulse him. Electrical experts disapprove.

See Electromagnetic Field.

A/BI 75-66

ELECTROLYTES

Possibilities of so disturbing the electrolyte balances in the blood as to produce a variety of recoverable weaknesses, confusions & convulsions, was intriguing when this project was joined by this reporter. Considerable reading persuades him that useful ones would be hard to attain, and many would as likely be non-recoverable.

Low total electrolytes, low Potassium, low Magnesium, may all lower the convulsive threshold and so dispose to convulsion; but too many complications are involved, besides the problem of how certainly to reshuffle the electrolytes to a desired imbalance. Ion-exchange resins were given up, and no other practicable procedures were found.

See: Ion Exchange.
Potassium.

A/BI 75-67

ELECTROMAGNETIC FIELD

An alternating current in a Solenoid coil suspended around a subject's head, has been reported to distryb, confuse and cause a sensation of lights flashing at the rate of alternation.

Q 1. Could such effect be obtained by A.C. of practicable strength, if the coil were concealed beyond the room's walls?

Q 2. If the alternations were at the rates at which flashing lights may convulse a sensitized subject (see FLICKER), would these sensations-of-light be strong enough to give the same effect as actual lights?

These questions seem worth investigation--at a low priority.

A/BZ 75-68

ELECTRO-NARCOSIS

So-called "Electro-Narcosis" is not so good as it sounds. A barbiturate must first be given to reach a level of anesthesia deep enough so that the subject will not react to the painfulness of the unidirectional current to be used (10 milliamperes or more, for at least 4 minutes).

Sodium pentothal, from 50 to 600 mgm., is slowly injected intravenously, with precautions against giving too little or too much.

As good results for interrogation should be obtained by injecting the sodium pentothal and omitting the electro-narcosis.

A/BC 75-69

ENERGY, Radiant — See Radiant Energy

ENVIRONMENT — See Deprivations

EPILEPSY — See Convulsion
EPILEPTIFORM CONVULSION

A/BE 75-70

EQUILIBRIUM

Disturbing a Subject's equilibrium makes him dizzy. With dizziness goes some irritability or possibly considerable anxiety. Psychological & physiological security together, is threatened.

Many conditions disturb equilibrium: those that produce Motion Sickness, and Flicker Sickness, which see. Middle ear disorders may produce mild dizziness; many drugs, mild or severe dizziness.

The Internal Ear's labyrinth controls equilibrium, which is typically disordered in Meniere's Disease (see POTASSIUM).

This reporter has given up the notion of tinkering with the blood-potassium, but still believes that Flicker Sickness is worth a laboratory experiment.

Severe Motion Sickness is highly distressing; but for it to reach a revealing-tendency level, it would amount practically to a third-degree procedure. See the card on Vibration for its production.

A/13 E 75-71

ETHANOL	See Ethyl Alcohol
ETHERS	See Anesthetic Gases

A/B I 75-72

ETHYL ALCOHOL

Intoxication

Adrenalin or an Amphetamin increases sensitivity to it	Nicotin aggravates its subjective symptoms	Morphin worsens it by increasing its depressive signs	It (alcoholic intoxication) deepens & lengthens the sleep produced by barbiturate

Levulose or Fructose slows it	Caffein moderately counteracts its depressive signs	Pervitin (an amphetamin) has marked objective sobering effect

Other Combinations

Alcohol + antihistaminic drugs may cause sudden unconsciousness.

Coprinus atramentarius (a mushroom) may be edible alone, poisonous if preceded or followed by alcohol.

A/B Z 75-73

EXCHANGE — See Ion-Exchange

EXTRAVERT PERSONALITY — See Subject's Personality

A/BI 75-74

FEAR (Terror, Anxiety, Worry, Etc.)

All intelligence servides and police organizations use fear or its related psychological reactions as a weapon. This is particularly true in communist areas or in dictator states. Its value as a weapon is enormous. Since we do not support third degree-type activities and even psychological harassment of the more severe variety would not be condoned, this very powerful weapon cannot be fully exploited by us. To offset this, we feel that research should be carried out to find how fear can be induced by chemistry or electronically without harm to the individual. This is an unexplored field and wide open for exploitation. Commercially used psycho-chemicals or medicinal chemicals that would create terror, dread, anxiety, etc. would be thrown away in this country. For instance, Metrozal which has been very useful in shock therapy, is no longer popular because, for one thing it produces a feeling of overwhelming terror and doom prior to the convulsion.

But terror, anxiety, worry would be valuable for many purposes from our point of view. We have some information (not in detail and not confirmed) that the Soviets and their satellites have used drugs which work along these lines. Therefore, this should be studied both from our use offensively and defensively and to find antidotes or counteracting agents.

A/BE-75-75

FLICKER

Flickering light will produce an epileptiform convulsion in about 5% of so-called "normal" persons; these probably have, inherited or acquired, a low convulsive threshold. Flicker will — if the right rate is used (see below) — convulse any Subject who has at the time been sufficiently sensitized by other means.

Of many possible sensitizers, Metrazol or Azozol is generally used.

Metrazol by mouth in a heavy dose (say between 700 & 1000 mgm.) will give most Subjects dizziness and nausea along with sensitization. Theoretically, the nausea might be avoided by a previous oral dose of Chlorpromazine for its anti-nausea effect; however, this drug-combination I have not seen in the literature, and — until tried and found safe — it must be considered dangerous, since both Metrazol and Chlorpromazine would affect the heart.

Metrazol in a smaller dose, given rapidly by intravenous injection, will sensitize most Subjects enough for flicker to convulse them. Azozol is surer, can sensitize all Subjects.

Light of an intensity of from 100 to 200 foot-candles is interrupted by an electronically operated pendulum-type shutter, giving rates of from 2 to 30 flashes per second, from a lighted circle about 30 inches in diameter; the S. could, however, be surrounded by lucite -type walls so that he could not look away from the light (closing the eyes would not avoid the flicker-effect). (A 13 to 18 flash-rate is most effective for most people, especially a rate of 16; 9 is more effective for a few.)

The Op. should be protected by ground-glass goggles, else he may prove to be one of those "normals" who is either convulsed, or nauseated and distressed, by the Flicker alone.

See FLICKER-SICKNESS.

A/B I 75-74

"FLICKER SICKNESS"

As noted under Flicker, an appropriate flash-rate convulses few non-sensitized, or insufficiently sensitized, Subjects. Yet it may produce some dizziness, nausea, and particularly an Emotional Instability (column 13) of more or less severity. Persons already neurotic or unstable are the more liable to flicker-sickness of this sort. The effect is cumulative; exposure for several hours daily, for days or weeks or longer, stands a chance of producing flicker sickness in anyone, stable or not, who works with the apparatus.

When it occurs on one exposure, it may develop before, not instead of, a convulsion; this happening could mean that the Subject had been insufficiently sensitized beforehand.

The emotionalism of flicker-sickness might be sought for its own usefulness, in place of a convulsion. In that case, previous sensitizing would be omitted to avoid convulsion. On this point, the reporter recommends an experiment which could be set up with little trouble in almost any room, using any normal personnel as subjects, viz.:

Without too much instrumentation, it should be possible to set an ordinary two-bladed fan to give 16 flashes per second, the most disturbing rate for most people (other rates between 13 - 18 might be tried), when placed in front of a strong enough light. The Subject would face this, the Op. face away and wear heavily colored or smoked goggles. (In a restaurant this reporter timed such a fan at about 6 or 8 flashes per second; too slow, but still it spoiled his appetite).

A/BI 75-77

FOOD DEPRIVATION, QUANTITATIVE — See Deprivation of Food, Quantitative

FREQUENCY — See Flicker
High Frequency

A/BI 75-78

FUNGUS TOXINS

Narcotic mushrooms have long been known — some, used by primitive peoples.

Amanita, Russula, Coprinus, are examples of the commoner genera recognized as toxic in one way or another. A Coprinus that is customarily eaten without toxic effects, is reported to be toxic if Subject has taken alcohol at about the same time.

Most fungi have been insufficiently studied, even by mycologists, to allow our determining whether or how they could serve the project. See also Pivle.

This vast field seems well worth more exploration.

A/BE 75-79

GAS CHAMBERS, AIRTIGHT ROOMS, ETC.

The possibility of using gas chambers or airtight rooms as a means for surreptitiously rendering a subject unconscious or to cause him to breathe some type of gas which would make the subject either more suggestible or pliable has been long considered. We have felt that this could possibly be done at a specially designed permanent-type installation but the chances of doing it in the normal safe house in the field or in open field conditions appears quite remote. Numerous problems obviously appear such as the preparation of the area, protection of the operator to prevent his being affected by the fumes and inherent dangers such as lethal dose, etc.

The possibility of using an automobile with the windows closed has been explored but presents certain technical problems most of which are the same as outlined above.

Deprivation of oxygen, which could be brought about in specially-built rooms, is commented on under Oxygen.

A

A/B E 75-80

GLUTAMIC ACID or GLUTAMIN

See Deprivations (page 2).

A low Glutamic-acid (or Glutamin, a derivative or antecedent form) content in the brain sensitizes to convulsion, of which it may be a competent-producing-cause.

Right now the relationships between Glutamin and epilepsy are being intensively studied by the Public Health at Bethesda. More will be learned of Glutamin metabolism, and the findings stand a good chance of being important to our project.

A/BI 75-81

GRAND MAL — See Convulsion

A/BE 75-82

GANGLION-blocking DRUGS

See Acetylcholin and Cholinesterase
Chlorpromazine
Tetraethylammonium

GASES

See Anesthetic Gases
Carbon Dioxid
Nerve Gases
Oxygen

ATBC .75-83

HEAT

Artificial fever can be produced by certain high-frequency-electrical, and other forms of apparatus used in physical medicine. These means have been neglected in this report; irascibility might be produced, but with little else for a usable mental state, and too expensively.

A persistently hot climate makes for fatiguability and irritability, and seems to increase the body's requirements of Vitamins B_1 and B_2-complex. To some extent it also increases sensitivity to alcohol. Undoubtedly it affects the action of other drugs in one way or another. This reporter has omitted to survey the relevant literature.

ATBE 75-84

HIGH FREQUENCY AND RADAR FIELDS

HIGH FREQUENCY (see also Iontophoresis, Item 2)

Persons working at the level of a highpowered sending antenna have been reported to become dizzy and confused.

Q. Could a high-frequency machine of medical type be modified to confuse a Subject in another room (such machines, of old styles no longer permitted, did emit short radio waves)?

RADAR

This radiation confuses flying birds at considerable distances.

Q. Can it confuse (and not heat or otherwise injure) a subject, at low power?

Both these means deserve some research--the radar more so than the high frequency--but at a low priority, since confusion is too small a gain to warrant much expense.

A/BI 75-85

HISTAMIN

Shock, similar to Insulin-shock, can be produced by histamin injections. Anxiety may be caused, or aggravated.

Histamin alone seems not useful enough for our purposes. It may have a place if combined with other drugs: to determine which ones, would call for more study than it has been given. Since a barbiturate and an amphetamin in alternation do provide a type of confusion that includes some anxiety and revealing-tendency, an alternation of histamin with anti-histaminics sounds promising.

Further study in this direction would take experimentation too, which could be dangerous.

See also Anti-Histaminics.

A/D C 75-86

HUMIDITY — See Relative Humidity

HYOSCINE — See Narcotizing Drug Combinations
(same as Scopolamin)
HYOSCYAMIN

A/BI 75-87

HYDERGIN

This relatively new chemical is derived from ergot (alkaloid). Its patent is held by Sandoz. The action of HYDERGIN is sedative in a general sense and probably would be used against hypertension, anxiety, etc. However, movies show that it very definitely disturbs the unusual motor activity of the Sandoz "waltzing mice" while not affecting sensory perception. It has a very low toxic quality and the lethal danger apparently is also low.

ABC 75-88

HYPNOSIS

Too extensive a topic for brief synopsis, it will be shortened here to two phases.

1. Hypnotizing an unwilling or unwitting subject is apparently unusual but not unheard of. Much depends on subject's susceptibility (not easily assessed beforehand), and operator's skill--especially his ability to shift from one to another method, meeting unexpected obstacles. (See also, UNWITTING SUBJECT).

One principle is certain: the operator says nothing about "sleep". He may be able to promote a subject's suggestibility, by telling him that certain visual phenomena wil occur under given experimental circumstances: e.g., optical illusions, after-images, color-contrasts. The operator must be very familiar with these; and the subject very unfamiliar; the trick is, to claim that the phenomena are suggested to the subject when actually they would occur naturally.

There are means of making any subject more easily hypnotized, before or during the process itself.

a) A state of mild narcosis, produced by any barbiturate.

b) A reclining, or at leastsemi-reclining and comfortable posture.

c) Deep breathing (a lowered O_2 content of the air would automatically promote this; or it might be suggested, for some cover reason; a metronome helps to hold a rate and also assists by a hypnotizing influence).

A/BE 75-89

(1

Hypnosis, Chemicals that increase suggestibility
Chemicals that decrease mental resistance
chemicals that act as "[redacted]" an aid to hypnosis

If the problem of hypnotizing (to any extent) the unwilling, unwilling or "different" subject is extremely important. Can work in hypnosis show that

A Individuals have been hypnotized accidently or the unwilling

B Individuals can be hypnotized indirectly by the so called "relaxation" techniques.

C Different or opposite subjects for manipulation can be successfully hypnotized by another

However - we don't if a subject who is totally

unwilling and normally intelligent ~~one~~ human be
hypnotized by one speaks alone without the use
of some aid — usually a chemical — and how then
~~do~~ chemicals which could be given to a subject without
his knowledge and accomplish the same desired result
are — to say the least, new.

This field needs a great deal of research and
work. Never-hypnosis is not new — but what
new work has been done along these lines has been
with willing subjects & medical patients who
are seeking aid (generally psychiatric assistance).

If generally speaking, liquor & alcoholic beverages in small amounts do not materially help a hindu hypnosis but large amounts of alcohol make hypnosis very difficult & impossible to obtain. The same applies to some psychedelic drugs & drugs that destroy mental activity.

If ideally, we need a chemical that can be given in a common liquid & fast that would be undetectable by the subject & further this chemical must only lower mental resistance & promote suggestibility - & cannot alter any mental processes or stimulate them.

In addition to its effect on the subject should be very subtle, generally unrecognized, pleasant (if felt at all) and of considerable duration. There ends are hoped to achieve. However, there are many variations of "mood" chemicals that should be started along these lines:

A. LSD (a person who has taken a substantial amount of LSD would however not show anything unusual - but the hallucinations might be "unimportant" in certain stages)

B - Ranunculin derivatives

C - Chlorpromazine - Thorazine

D - Dolitzine

E. DENNISON

5

A/BI 75-90

LYSERGIC ACID DERIVATIVES (LSD-25)

1) Comment on in general

2) Why we know or talk

1) Tests in normals only ← very startling case in a few individuals by IPP - increased interest when combined with given work

2) " " psychotics only

3) Writings of others ← only info when uncontrolled use - bad, malicious Trash types

A Detroit experiments

B British experiments

C German use in criminal

D Canadian

E Obviously Soviets have LSD

3) FBI is ready for some time + more need any reports - Detroit

THIRD DEGREE TACTICS

1) officially disapproved

2) makes extensive use of

A – leaders who subj

B – materially influe
particularly vicious

C – materially influe
"

3) results usually are not good –
will confess to anything if s
thought to bear – but accu
confession is in doubt

4) strong propaganda weapon

A/BI 75-92

BRAIN WASHING — INDOCTRINATION

1) Show N interest in subj generally
2) Pt indications of specific area
   1) Drugs
   2) It
   But debility - weakness brought on by lack of food, cold, exhaustion etc seem established pattern
3) Can we brain wash - how rapidly > how?
   " " re-indoctrinate
4) Can we condition against brain wash > how?

ABE 75-93

[redacted] HYPOSPRAYS, GASES, AEROSOLS

As early as 1951, experimentation was carried out using the then standard Hypospray instrument as a possible weapon in the ARTICHOKE work. At that time, we felt that this technique had considerable merit. At least it presented the possibility that chemicals could be induced into the human body without noticeable rupture of the skin or wounding and to a large extent painlessly. We requested the Medical Division to explore this further and the medics ultimately gave us a report of a negative nature.

The main difficulty with the Hypospray was that it could not penetrate through clothing and that unless it were carefully applied, it could create bruises or wounds and possibly other complications. Further there did not appear at this time a suitable agent for our purposes as yet developed (intra-muscular injection type).

Our last information was that Squibb was considering the development of super-powerful Hyposprays which, instead of being fired by a spring mechanism as in the common Hypospray, would be fired by a compressed gas which would be much more powerful. We do not have any details on this at the present time.

Similar to the Hypospray, we have long thought that some technique could be devised whereby a gas, aerosol or possibly a dust could be discharged at short range into the face of a person and produce a coma or other desired effect rapidly and quietly. We have experimented with tear-gas pencils and they are effective in closed areas at from six to ten feet. We feel that a gasgun could be designed, shaped like a pencil to discharge gas that might have a coma-producing effect on a given subject. We have not yet been able to find any suitable device and we have as yet no knowledge of a gas, aerosol or dust that fits this use.

A[redacted]

INDUCED CURRENT

See Electric Shocks
Electromagnetic Field

A/BE 75-95

INSULIN

By injection, Insulin has several uses outside the treatment of diabetes.

1. It reduces the blood-sugar; a far-enough-reduced blood-sugar lowers the convulsive threshold. Large doses of insulin can eventually lower it enough to produce unconsciousness, finally a convulsion. This procedure is dangerous, and offers no advantage over other means of convulsing when convulsion is desired.

2. In smaller repeated doses over a period of time, Insulin:

   a. Renders anxious neurotics somewhat less so.

   b. Assists in some methods of treatment of drug addiction.

   c. Expedites recovery from chronic illnesses marked by emaciation, or starvation.

3. The effects of Insulin (by injection) + alcohol (by mouth) are uncertain.

Except possibly for Item(3) above, Insulin has little or nothing to offer this project.

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Except possibly for Item(3) above, Insulin has little or nothing to offer this project.

A/BI 75-95

INSULIN

By injection, Insulin has several uses outside the treatment of diabetes.

1. It reduces the blood-sugar; a far-enough-reduced blood-sugar lowers the convulsive threshold. Large doses of insulin can eventually lower it enough to produce unconsciousness, finally a convulsion. This procedure is dangerous, and offers no advantage over other means of convulsing when convulsion is desired.

2. In smaller repeated doses over a period of time, Insulin:

   a. Renders anxious neurotics somewhat less so.

   b. Assists in some methods of treatment of drug addiction.

   c. Expedites recovery from chronic illnesses marked by emaciation, or starvation.

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A/BE 75-96

INTERNAL EAR DISORDERS	See Equilibrium
INTERRUPTED LIGHT	See Flicker
INTERRUPTED LIGHT + INTERRUPTED SOUND	See Interrupted Sound

7/13 Z 75-97

INTERRUPTED SOUND

Like Interrupted Light, Interrupted Sound also can produce convulsion in a sufficiently sensitized Subject. One loud sound alone, may produce it.

1. To attain this effect of Interrupted Sound in 100% of Subjects, a heavier dose (perhaps too strong) of sensitizing means would be required. That is, a reasonable dose would yield convulsion always after Inter. Light, not quite always after Inter. Sound: while the literature is not so sure as to Sound, as it is for Light, it gives this impression.

2. The Op., as well as other persons in the vicinity, could be less well protected against Sd.

Hence Inter. Sound may as well be omitted from consideration as a practicable means.

INTERRUPTED SOUND + INTERRUPTED LIGHT

A combination of interruptions of both Sound & Light, might be more effective than either means alone. Either a smaller sensitization, or a shorter exposure, might do. However, the literature I have read on this point has been unpromising.

A/B I 75-98

INTERRUPTED SOUND + INTERRUPTED LIGHT

See Interrupted Sounds (foot of page

INTOXICATION

See Ethyl Alcohol

INTROVERT PERSONALITY

See Subject's Personality

A/BI 75-99

ION EXCHANGE

Ion-exchange resins (used commercially to soften water) have been suggested for use in electrolyte disturbances; that is, when the blood-sodium and blood-potassium balance is disordered as in Ménière's Disease (severe attacks of dizziness, sometimes with convulsion).

However, it appeared that resins for such a purpose as upsetting electrolyte balances, would be too bulky, unappetizing and probably nauseating.

The ion-exchange-resin notion was dropped.

See POTASSIUM, & ELECTROLYTES.

A/BI 75-100-1

IONS See Ion-Exchange
also Iontophoresis

A/B I 75-101

IONTOPHORESIS (or IONIC GALVANISM)

A galvanic current can introduce the ions of soluble substances into body tissues.

1. If electrodes are applied to one hand for polygraph determination of the psycho-galvanic current — iontophoresis electrodes might be applied to another limb.

   THIS IS PURE SPECULATION on my part; did not find it alluded to; it may have been explored and discarded. Such a circuit might inevitably interfere with the others.

2. Bombarding an area of the brain with ions by iontophoresis, or with molecules by a high frequency current, appears to be prevented by the skull's impermeability.

The cocain ion of a dissolved cocain salt, will penetrate the skin from the positive pole. Ordinarily it will not pass deeply enough to enter the blood-stream and so produce a generalized effect. Cocain would also give a strong and undesirable local effect.

Only very powerful drugs could be so administered, since so little (if any) could be expected to enter the circulation; and the S. would be no more unwitting than if very small doses had been given disguised by mouth. However, if gotten into the circulation at all, a smaller dose (than that by mouth) would be effective, and much more rapidly.

It might prove possible so to use an Antimetabolite, or a drug to disturb the cholin-cholinesterase balance: either one aimed at confusing, or sensitizing to convulsion.

More study, and vast experimentation, would be necessary; probably without success.

A/BI 75-102

ISONIAZID

Isoniazid can be given orally, or by injection, to sensitize a subject to convulsion; specifically, enough so that Flicker (which see) will convulse. (See also Unwitting Subject)

However, the range of effective dosage is great (from 22 to 35 mgm. per kilogram of body weight); even at top dosage, an occasional subject will not convulse under flickering light. Also, these large sensitizing doses are nauseating, and definitely toxic.

It is recommended that this drug be given no further consideration in the project.

A/BI 75-103

K

See Potassium
Electrolytes

A/B I 75-104

LABYRINTH DISORDERS	See Equilibrium
Laughing Gas	See Anesthetic Gases
Light, Colored	See Colors
Light, Flickering Interrupted	See Flicker
Lobectomy	See Lobotomy

A/OE 175-105

LOBOTOMY and Related Operations

See AMNESIA

The problem of disposal of subjects is constantly present in intelligence operations. Even with fully cooperative subjects the matter is simple but where disposal involves totally unwilling subjects or subjects who cannot be trusted, the problem is complex, expensive and very difficult. Since disposal does not mean shooting a subject by our standards we are faced with at least three serious issues:

1) Placing the subject somewhere (confinement, re-settlement).
2) Insuring his adherence to our views and/or
3) Preventing his giving away our secrets.

If by some means we could create a perfect and thoroughly controlled amnesia, the matter would be simplified but amnesia is not certain and cannot be guaranteed. Because of this a number of individuals who are fully cognizant of the disposal problem, suggested that LOBOTOMY or one of the related operations might be the answer or at least a partial solution. It was argued that in general a lobotomy would create a person "who no longer cared," who had lost initiative and drive, whose allegiance to ideal or motivating factors no longer existed and who would probably have, if not complete amnesia at least a fuzzy or spotty memory for recent and past events. It was also agreed that certain lobotomy types of operations were simple, quickly performed and not too dangerous.

The A group examined the idea of LOBOTOMY for our purposes and are totally agreed that this technique has no place in our operations for the following reasons:

1) It is inhumane.

2) It is against all concepts of "fairplay" and the American way of life and it could never be officially sanctioned or supported.

3) Its use, if discovered, would be a terrible propaganda weapon against us -- it would wreck our nation's prestige--it would tend to destroy the effectiveness of the Agency.

4) It is extremely dangerous
   a) Surgical risk is great
   b) Brain damage is extensive
   c) It could, if faulty, produce a "vegetable."

5) It requires hospitalization, surgical ability, proper anesthesia.

6) It is doubted if any American surgeon could be found to perform the operation for the above purposes.

7) It leaves a telltale scar.

8) It would invite horrible reprisals.

(See also following comments on LOBOTOMY by A

A

A/BE 75-106

LOBOTOMY

Lobotomy of a Subject would produce several days of a gradually recovering confusion (#8). Against its use are: (a) the ordinary surgical risks; (b) the leaving of a scar; (c) the permanent brain-injury.

The simplest type--"transorbital lobotomy" or the "ice-pick operation"--involves little (a) or (b), but appreciable (c).

Lobotomy operations tend/to "tame" a violent Subject/ permanently (#14), and to reduce anxiety (# 1). In psychiatric practice, he is usually a violent psychopathic-personality; or an insane or near-insane person with a compulsion toward homicide or suicide.

A continuing check of the literature is desirable, as to three substitutes for lobotomy:

i) A so-called "chemical lobotomy," viz., a taming but of temporary duration. See Rauwolfia, and Chlorpromazine.

If one or more small regions in brain or brain-stem can be identified, whose stimulation would produce a temporary taming, then:

ii) A non-toxic drug may be found, by radioactive-tracer techniques, that will be attracted to such an area, and so produce a taming that can last for some time. See Amygdaloid Nucleus; also, Temporal Lobe.

iii) Ultrasonics, or some other radiating energy, may be developed to give a physical stimulus to such an area without injury. At present, Ultrasonics can produce a surgical-type (permanent) lobotomy; but the skull must be opened to apply it. See Ultrasonics.

A/BE 75-107 -1

LOWERING, CONVULSIVE THRESHOLD

See Convulsive Threshold Lowered

A/B I 75-108

LSD25

Of this ergot-derivative or synthetic equivalent, 40 to 60 gamma or an even smaller single dose, is effective by mouth and practically tasteless. The effects resemble, also differ from, those seen in some temporal lobe (of brain) disorders; and those caused by Mescalin, Marijuana, Bufotenin, bulbocapnin, and amphetamins — these in an approximate descending order of similarities.

For the purposes of interrogation, one of LSD25's most important features is its tiny dose. (See Unwitting Subject). It produces very marked emotional instability, of which both the excitements and the depressions may prove more hindrance than help. There is little, or much, confusion, but no amnesia after recovery.

Suggestibility increases little if at all. Some Subjects have spontaneously undergone regression to childhood or youth, somewhat like that which is suggestible under hypnosis. There are many distortions of time, place, and person, in all Subjects. Hallucinations may be pleasing, or terrifying/anxiety-provoking, but not especially helpful to an Operator. During the several hours or day that the effects remain prominent, there may or may not be periods marked by a strong revealing-tendency.

An LSD25 Subject tends to behave like a hebephrenic schizophrenic ; a Mescalin S., and a Bulbocapnin S. to a greater or less extent (according to the bulbocapnin dose), behaves like a catatonic schizophrenic.

LSD25 lowers the convulsive threshold; may occasionally convulse, as with larger doses.

At the moment, no known antidote is available; Serotonin may prove to be one. Further study of LSD25 is strongly recommended.

A/BI-75-109

MAGNESIUM	See Electrolytes
MAREZINE	See Chlorpromazine
MARIJUANA	See Unwitting Subject
MEANS, Choice of	See Subject's Personality
Meniere's Disease	See Potassium
Mephenesin	See Myanesin

A/BE 75-110

MESCALIN

Mescalin, or Peyote, derived from a cactus, produces an artificial catatonic schizophrenia. (See LSD25; and Bulbocapnin). It can be given by mouth.

Compared with LSD25 effects, Mescalin causes more pronounced hallucinations,
more worsened critical judgment,
less pronounced euphoria (elation),
more intense experience of split personality,
common (instead of rare) persecutory and/or grandiose delusions.

Color sensations are brilliant, but colors change and are misplaced, and may give other sensations, e.g., a color may give the sensation of something tasted, or heard. As with LSD25, space, time, and the body-scheme, are distorted.

Mescalin-symptoms have been terminated with Sodium Succinate by mouth.

Given by itself, Mescalin seems to offer Interrogation less assistance than does LSD25. However, its literature should not be neglected.

Of greater interest is the possibility of combining Mescalin with some potato-plant-family drug. Mescalin + stramonium, it is reported, has caused criminals to confess. This lead is well worth following.

METHEDRIN — See Amphetamins
Unwitting Subject

METHYLPENTYNOL — See Oblivon

A/BE 75-112

METRAZOL

See Unwitting Subject.

Metrazol by mouth in a heavy dose (say between 700 & 1000 mgm.) will give most Subject dizziness and nausea along with sensitization. Theoretically, the nausea might be avoide by a previous oral dose of Chlorpromazine for its anti-nausea effect; however, this drug combination I have not seen in the literature, and — until tried and found safe — it must be considered dangerous, since both Metrazol and Chlorpromazine would affect the hear

Metrazol in a smaller dose, given rapidly by intravenous injection, will sensitize most Subjects enough for flicker to convulse them. Azozol is surer, can sensitize all Subject

A larger dose of Metrazol intravenously will convulse many Subjects forthwith, without the added means of Flicker. However, a second injection may be required (if flicker is not to be added), and even this may not convulse. These non-convulsing large doses do cause a terrifying anxiety and put considerable strain on the heart. If anxiety is the mental state desired; or else, convulsion: it would seem wiser to use a means that will definitely produce the one, and a different means to produce the other.

A/BE 75-113

Mg see Electrolytes

A/BI 25-114

MIDDLE EAR DISORDERS

When the Eustachian tube (connected with the middle ear) of one or both sides, is blocked — say by a mild inflammation — some psychological effect is expected. For a few days at least, until he becomes used to it or its intensity tends to lessen, the Subject is rendered irritable, sometimes dizzy.

This finding is probably useless to the project.

AHE 73-115

Motion Picture Screen

21 November 1955

Screen Hypnosis
Dr. Med Hans Sutermeister

A reduction of alpha amplitudes is a symptom of general reduction in cortical activity.

Psychologically the general lowering of consciousness during the picture facilitates the phenomenon of identification and suggestion as in hypnosis.

Cohen-Séat, Gastaut, Bert: Modification de l'EEG pendant la projection cinematographique, Revue de Filmologie, V, 16, 3, Paris 1954

Cohen-Séat, Faure:Retentissement du "fait filmique" sur les rhythmes bioelectriques du cerveau. Rev de Filmol. V, 16, 7, Paris, 1954

Gastaut: Effects psychologiques, somatiques et electro-encephalographiques du stimulus lumineux intermittent rhythmique. Rev. de Filmol. II, 7/8, 215, Paris, 1951

Heuyer, Cohen-Séat, Lebovici: Note sur l'electroencephalographic pendant la projection cinematographique chez des adolescents inadaptes. Rev. de Filmol, V, 16, 51, Paris, 1954.

Kluge, Friedel: Ueber die Einwirkung einformiger akustischer Reize auf den Funktionszustand des Hirns. Zeitschrift fuer Psychother und mediz. Psychol. 1953, 5, 212, Stullgort, 1953

Pflanz, Einfluss rhythmischer Sinnenreize auf den Organismus. Deutscher medizinische Wochenschrift, 1953, 23/24, 579

Sutermeister: Film and Mental Health. Ges. N. Wohlf. Orell-Fussli, Zurich 1950, 2, 249. Film und Psychogiene, Praxis, 1955, 15, 328.

British Journal of Medical Hypnotism, Vol. 7, No. 1, Autumn 1955

A/B I 75-116

MORPHINE	See Ethyl Alcohol
MOTION SICKNESS	See Equilibrium
MUSHROOMS	See Fungus Toxins

A/BI 75-117

Myanesin

Myanesin (Mephenesin, Tolserol, & other synonyms) by mouth, reduces anxiety mildly. To produce only this effect, its usefulness seems limited.

Possibly it could be used in connection with some other means, advantageously. The literature might be further searched; more fruitfully, perhaps, than searching further for a similar usefulness of Ohliven, or Tetraethylammonium.

4/BI 76-118

Na See Electrolytes

A/B I 25-119

NARCO-ANALYSIS

See Narcotizing Drug Combinations, & Twilight Sleep.

(here distinguished as Narco-Analysis)

No conclusion has been reached here, on whether a barbiturate + an amphetamin/is generally superior to a belladonna derivative (or relative) + an opiate. I am inclined to favor the former; possibly because of some psychiatric experience with it, and none with the scopolamin/morphin team.

Evidence favors one conclusion, that barbiturate + amphetamin is superior to a barbiturate alone. In some circumstances, an amphetamin alone would be much more expeditious, since the Operator starts with the Subject as is, without having to put him first to sleep.

Another comment; since the amphetamins Dexedrin and Methedrin are strong antagonists to any barbiturate, one must not give his amphetamin in so strong a dose as wholly to destroy the barbiturate effect. He might as well have omitted the sleep-producing drug altogether — unless sleep was brought into the picture for some other reason.

Dexedrin or Methedrin can equally well be used to lift a S. moderately out of an alcoholic narcosis. See Amphetamins.

BI 75-120

NARCOSIS — See Oxygen
Narcotizing Drug Combinations

NARCOTICS — See Narcotizing Drug Combinations

A/BI 75-124

NARCOTIZING DRUG COMBINATIONS

Our best-known chemical means can conveniently, if rather arbitrarily, be classed as: (1) "Twilight Sleep", and (2) "Narco-Analysis", which see. See also individual special psychiatric drugs like LSD25, Mescalin, Marijuana, Bulbocapnin, Cocain, &c., which are arbitrarily left outside these two classes. See also Anesthetic Gases, similarly handled.

(1) A "potato-family" drug + an analgesic drug.
Traditionally, scopolamin + morphin.
Numerous combinations of belladonna or its other derivatives (atropin, hyoscyamin, &c), or relatives (stramonium; syntropan); + other opiates (heroin, &c), are used.

Since new combinations, and new applications of old ones, are frequently described, a constant check of the considerable literature should be maintained on narcotic drugs — the above, and others as they appear.

See "Twilight Sleep".

(2) A hypnotic (sleep-producing, not hypnotizing) drug + a stimulant (which could produce an epileptiform convulsion, if given in a dose much larger than used in this connection). For the mental states produced, see Narcoanalysis.

Traditionally, a barbiturate + an amphetamin.
In psychiatric medicine, the barbiturate may oftener be used alone; for our purposes, adding the amphetamin amplifies the take without over-complicating the procedure.

By injection: Sodium Amytal (or Pentothal, faster-acting but less safe). Or by mouth: Seconal or other barbiturate, or the related Chloral (slightly less safe).
Methedrin or Dexedrin, to arouse (partially) the then sleeping Subject.

AIBE 75-122

NATURAL POISONS See Plant, Fungus
Bacterial Toxins
Animal

NERVE GASES

The toxicity of Parathione, "DFP", "TEPP", &c., derives chiefly from their destruction of Cholinesterase, and so allowing Acetylcholin to accumulate and halt certain essential processes in the body economy.

So far as this reporter has searched, he has not yet found a use for Nerve Gases in Interrogation. Search in other directions should be more productive.

NICOTIN
(i.e., Tobacco, not Nicotinic Acid) See Ethyl Alcohol

Nicotinic Acid See Deprivations (p.2, Niacin)

NITROGEN See Atmospheric Pressure

NITROGEN NARCOSIS See Oxygen

NITROUS OXID See Anesthetic Gases

NOVOCAINE See Iontophoresis

NUCLEUS See Amygdaloid Nucleus

A/BI 75-125

Oblivon

Either Oblivon (Methylpentynol), or Tetraethylammonium chlorid, in small dosage by mouth, will reduce anxiety. Effect is relatively mild.

Since anxiety-reduction alone seems to have limited usefulness, further search of the literature in this connection seems unwarranted at the moment.

A/B I 75-126

ODORS

Odors give emotional responses; but this reporter has not hit upon one that could be usefully adapted to our purposes.

Among third-degree methods, terror has been produced by exposing the Subject, Operator being masked, to a harmless odor (e.g., geranium) simulating the smell of a lethal gas.

A/BL 75-127

OPIATE

see Ethyl Alcohol
Sedative-Deprivations
Twilight Sleep
Narcotizing Drug Combinations

A/BI 75-128

OXYGEN

See Deprivations (foot of page 3)

Oxygen comprises about 21% of the air at sea-level. A reduction of the concentration to about half-normal (12.5 to 11.5 %), early affects the memory — before it is as low as 12.5%. With less O_2 than that, judgment & concentration are worsened, while elation & over-talkativeness, irritability and a lack of self-criticism, appear. When the O_2 is around 11.5% or below, emotional outbursts are added. This progression of symptoms goes on to some degree with the passage of time, even if the O_2 falls little below 12.5%.

As with Carbon Dioxid (which see), it is a question of how tight a room, and how close a measurement of gas, would be needed. Oxygen might well take more fine detail in its use, than would CO_2, but it would produce a wider range of desirable mental states. Again the Q, how to protect the Op. from the same states: this I do not know either.

Nitrogen Narcosis.

Six % O_2 + 94% N_2 causes confusion, then unconsciousness. This finding accounts for the "Nitrogen Narcosis" of "skin-divers" (who wear a tank, not a suit); they use up too much of their O_2 before they are aware of its lack.

It sounds as though there was too narrow a safety-margin here, for our use. I am too uninformed to have an opinion as to this.

IB I 75-129

PAIN	See Dolitrone
PANAEOLUS	See Piule Fungus Toxins
PENTYLENETETRAZOL	See Metrazol
PERSONALITY OF SUBJECT	See Subject's Personality
PERVITIN	See Amphetamins
PEYOTE	See Mescalin
PETITE MAL	See Unconsciousness
PHYSICAL ENVIRONMENT	See Deprivations

A/BZ 95-130

PIULE

(not Peyote)

If correctly read, Piule is a Datura (a potato-family or belladonna-group, member), and its toxic principle is almost or quite the same as that of the fungus Panaeolus.

Whether superior or inferior to other belladonna relatives, for interrogation purposes, is unknown to me. Species of Panaeolus are very common, and their toxins might well repay investigation.

A careful study of PIULE has been underway for a [illegible] nor worthwhile data as yet

Piule has very interesting history & is used even today in Mexican Indian ceremonials.

collection expedition [illegible] 1953

A/B C 75-131

PLANT TOXINS

Narcotic properties have been ascribed to hundreds, perhaps thousands, of plants, vines, shrubs & trees. A small 1933 volume mentions nearly a hundred growing in the Pacific Coast region alone.

Other sources describe many plants in use by primitive peoples for narcotic purposes.

A few have been noted individually in this card file. Most were not followed through.

The field as a whole deserves far more attention than this reporter has given it. It is also probable that much of the literature, while describing everything else about a plant, will have little to say of its toxicology. Much experimentation is needed.

A/BI 70-132

POISINS, NATURAL See Fungus
Bacterial Toxins
Animal
Plant

ATBI 75-133

Polygraph (use of in connection with A operations)
useful - in check on only after & before
need for drug studies in connection with [redacted] work
" " [redacted] " " " " " "

Psychiatrist (useful both as a liaison handling
inquiries & also to give additional info-

?

A/BE 75-134

POTASSIUM

See also Potassium Chlorate.

Low blood-potassium is associated with a low (low blood-potassium) convulsive threshold; and it is characteristic of Ménière's Disease with its severe attacks of dizziness and sometimes convulsions. But " " cannot be simulated by merely reducing the blood-potassium; besides, such a reduction would be very hard to control, and not easy to measure, and could progress to a fatality.

If a low blood-potassium should prove useful in any other way, it can be readily obtained — with the reservations already noted — by administering Desoxycorticosterone.

Like Potassium Chlorate (which see), the blood-potassium seems worth no more attention.

A/BE 76-135

POTASSIUM CHLORATE

It has been claimed that this chemical, added to smoking tobacco, gave a narcotic-like effect. Not having tried to track this down, I do not know the mechanism or the effects, and whether referable to the K or the ClO_3 ions.

However, since Chlorate is fairly toxic, it seemed unprofitable to study it farther.

A/B E 75-136

"POTATO-FAMILY" Drugs	See Narcotizing Drug Combinations
PRESSURE	See Atmospheric Pressure Carotid Sinus Pressure
PROCAINE	See Iontophoresis Cocain

A/B E 75-136

POTENTIATORS, POTENTIATING ~~DRUGS~~ CHEMICALS (1

Potentiation by definition is "the combined action of two drugs, being greater than the sum of the effects of each used alone." In general a potentiator or potentiating chemical is one which sustains or possibly enhances the effect of another chemical or prolongs or greater than obtained by the use of the first chemical — and without the inherent dangers of over dose (toxic dose) of additional amounts of the first chemical.

From an intelligence point of view this is very important but little if any work has been done

with – at least to our knowledge.

Recently we were informed that Rauwolfia or one of its commercial derivatives has a strong potentiating effect when used with alcohol. This is interesting but has not been tested.

Articulate would like answers to the following:

1) Can we find a chemical which will sustain a subject in the so called "twilight zone" for many interrogations over long periods of time – but not calling for repeated doses or injections.

2) Can a potentiator be developed that would hold a subject for considerable periods of time in an inebriated state, in a coma, in any "emotional" state.

3/ Can a botanist or be developed that would lower inhibitions, increase suggestability etc for long periods of time.

A/BI 75-137

PROPHYLAXIS AGAINST REVEALING

Studies of how to encourage a revealing-tendency, engender notions of how to discourage.

1. Any enduring boost of a friendly agent's resistance to interrogation, would be valuable. Long-lasting antidotes to drugging may be available — this reporter has not found them. Required would be substances that the body could store (immobilize) in liver, muscle, bone , &c., and use (mobilize) on demand.

(a) NEBULOUS & SPECULATIVE (Calcium can be stored in bone; whether it could (& would) have usefulness (_____ beyond a possible mild prophylaxis against anxiety, is unknown to me (Vitamin C, if it could be rendered storable by some combination, might tend (_____ to postpone fatigue (alone, it is notoriously non-storable). (Serotonin, intensively studied recently by physiologists, may be promising.

(b) Post-hypnotic Suggestion, or some further development of Conditioning & Deconditioning, are the approaches that look most productive at this time.

2. The captured unfriendly agent may have been well prepared by some such means. How well prepared, would be hard to say. Some drugs' influence could be detected by electro-encephalography; offhand, this sounds profitless, as too little seems known about it.

Of the above, a experiment with 1(b) rates/good priority; the rest, a low one — or no study at all, except of Serotonin.

A/B I 15-135

PYRIDOXIN

See Vitamin B6
Deprivations

A/BI 75-139

QUANTITATIVE FOOD DEPRIVATIONS — See Deprivation of Food, Quantitative

QUATERNARY AMMONIUM — See Tetraethylammonium

A/B I 95-140

RADAR See High Frequency

A/BF 75-141

RADIANT ENERGY,
Unidentified.

Various electric currents, ultrasonics, etc., are noted elsewhere in this file. It is also possible that some newer form of radiant energy, some atomic particles, could be aimed at sleep centers in the brain , or at brain centers that inhibit the waking state. Sudden sleeping might be produced in this way, with an unwitting subject if the apparatus were worked from another room.

This reporter admits that he has not found a hypothetical "sleep ray" in the literature. He believes it either is, or will be, there. It would be so valuable that more searching is highly recommended. Certainly there are sleep-centers in the brain.

A/B I 75-142

RAISING CONVULSIVE THRESHOLD See Convulsive Threshold Raised

RAUDIXIN See Rauwolfia

A/B I 75-143

RAUWOLFIA

Raudixin (Squibb) and Serpasil (CIBA) are available and give approximately equivalent effects (but the dosages are different).

The drug "tames" the subject, producing essentially an under-anxiety (col. #1), along with some reduction of bloodpressure; notably, without drowsiness.

Given three times daily, it becomes effective gradually after several days.

One intravenous injection of Serpasil will produce tranquillity, with very little or no drowsiness, after 30 or 40 minutes and lasting several hours.

Subject under strong Rauwolfia influence is so unemotional and unresponsive to anxiety-provoking stimuli, that he would be expected to show nothing diagnostic on the polygraph.

It is likely that a dosage can be arrived at, to reduce anxiety enough and not too much for P.G. (ambulatory patients under daily oral doses of Rauwolfia carry on their business normally and do react appropriately--though less vigorously--to anxiety-producing stimuli).

Experimentation with this drug is strongly recommended. It is so non-toxic that anyone should be willing to play guineapig.

Rauwolfia + amphetamin has been tried; should be compared with barbiturate + amphetamin. Rauwolfia followed by enough alcohol to mildly intoxicate, may produce the symptom of "perseveration" — S. says the same thing over & over again. This would be disadvantageous.

Rauwolfia alone, lately reported to cause bizarre dreams: might be an advantageous property.

HBI 75-144

Recall

21 November 1955

Normal recall is more effective than hypnotic recall in the case of nonsense material, but hypnotic recall is greater than 50% more effective than normal recall in the case of poetry, and over eighty percent more effective in the case of motion picture screens.

Light trances (may be) more favorable for hypermnesia than deeper hypnosis, at least for recent material.

Items learned under anxiety producing conditions are normally less well recalled than those learned without anxiety. But this difference is eliminated under hypnosis.

All the above refers to hypnotic recall of material learned in the normal, nonhypnotic state.

Hypnodynamic
Psychology
by Milton V. Kline
The Julian Press, 1955

AFBI 75-145

RELATIVE HUMIDITY

I. Low

(a) It is probable that a low relative humidity of the atmosphere (30% or below), tends to lower the convulsive threshold of persons in it. That is, means producing a convulsion will do so on shorter exposure, or in small doses.

(b) A low relative humidity tends to provoke irascibility.

(a) might be advantageous, (b) disadvantageous.

Since an artificially controlled humidity would require an oxygen-chamber type of installation, it seems not worthwhile.

However, the effects of a naturally occurring very low (say 10%) relative humidity--on both subjects and operator--should be kept in mind. It is possible that an operator could be protected from becoming irascible, by a taming drug (Rauwolfia).

II. High

When degradation is included in brain-washing, excessive dampness is commonly included in the dirty environment. Wetness add to discomfort and probably reduces resistance to respiratory illness.

RESINS See Ion-Exchange

RUBBER ROOM See Vibration

RUSSULA EMETICA See Fungus Toxins

RESERPINE See Rauwolfia

A/BI 75-147

SALICYLATES	See Aspirin
SCENTS	See Odors
SCOPOLAMIN	See Twilight Sleep Narcotizing Drug Combinations
SECONAL	See Narcoanalysis Unwitting Subject

A/BI 75-148

SEDATIVE DEPRIVATIONS

When a Subject is addicted to the long-term use of a sedative (probably of any type), e.g., Alcohol, Chloral, Barbiturate, Opiate, and is suddenly and wholly deprived of his drug, then within several hours or a day he will have an epileptiform convulsion — perhaps a series of convulsions.

This fact might be put to use, with a known alcoholic Subject, if the Operator were prepared to take advantage of the convulsion whenever it occurred. Whether a post-convulsion confusion so procured would last longer, show more revealing tendency, or be more rarely complicated by a disturbing excitement, than is an epileptiform convulsion produced by more direct and immediate means, is uncertain.

A/B I 75-149

(1

SENSITIZING TO CONVULSION (i.e., a considerable Lowering of the Convulsive Threshold)

A sure and powerful means of sensitizing-to-convulsion (#9) is an intravenous injection of Metrazol or equivalent.

There are also various less potent means.

Question: could several such be combined advantageously?
would their effects be additive, and so more potent?
would certain ones tend to neutralize others, and so defeat the purpose of combination?

Further study seems worthwhile.

Next page gives table of various Means which produce sensitivity to convulsion (#9).

Theoretically, a large enough dose of most such means would go on to produce convulsion (#12).

Practically: some can be so used;
others cannot be, since a convulsion-producing dose is too large, i.e., toxic in other respects.

See itemized Means for details.

Some such means produce a possibly-useful confusion (# 8), preceding or replacing #12.

SENSITIZING TO CONVULSION

Literature States, OR Suggests, that reasonable doses of these means are sensitizing:

(rather fast)

States!	Suggests
Lowered bloodsugar	
Insulin	
Scopolamin	
Hashish	
Mescalin	
LSD-25	
Amphetamins	
Metrazol	
Isoniazid	
Loss of CO_2	
Electronarcosis	

This list is not exhaustive; more study is necessary.

(rather slow)

States	Suggests
	Lowered total blood-electrolytes
	Lowered blood-magnesium
	Raised blood-potassium
	Cortisone
Sudden deprivation of an accustomed strong sedative, as opiate, alcohol, barbiturate	Sudden deprivation of certain vitamins or amino-acids
	Certain antimetabolites
	Mild deprivation of O_2

A/BI 75-150

SEROTONIN

Serotonin is a hormone derived from body tissues, lately publicized as a "sanity hormone". LSD25 (which see) acts somewhat like an antimetabolite toward Serotonin; therefore the latter, possibly in some combination not yet discovered, may be useful in developing an antidote to LSD25.

Further study of this substance' properties is strongly recommended.

A/B I 75-151

SERPASIL	See Rauwolfia
SHOCKS, ELECTRIC	See Electric Shocks Conditioning
SINUS PRESSURE, Carotid	See Carotid Sinus Pressure
SLEEP	See Anesthetic Gases Electric Shocks Electro-narcosis Hypnosis Narco-analysis Radiant Energy Twilight Sleep
SMELL	See Odors
SODIUNA	See Electrolytes
SOUND, INTERRUPTED	See Interrupted Sound
STARVATION	See Brainwashing Deprivation of Food, Quantitative Drprivations

A/BI 75-102

Sleep-atropine

We have found in our own research that if we inject atropine followed within thirty minutes by prostigmine and then finally acetylcholine, we produce in normals an increase in sleep both subjectively and objectively as measured with the electroencephalogram. - page 11

Atropine 3 mgm 1-M
30 mins. later give
Prostigmine SO_4 2 mgm 1-M
15 mins. later give
Acetylcholine 200 mgm 1-V

Atropine was given to block the muscarine activity of acetylcholine while leaving its nicotinic activity untouched, and to protect the subject against acetylcholine induced cardiac arrhythmias. Atropine also inhibits acetylcholine esterase and thus elevates parasympathetic activity. Prostigmine markedly inhibits esterase. Acetylcholine was given to produce a sudden boost in parasympathetic activity.... after the injection of the acetylcholine there was a sudden production of sleep and fatigue in two of three normal subjects followed by sleep....the induction of high parasympathetic nicotinic activity by means of atropine, prostigmine and acetylcholine appears to decrease the level of consciousness...The change in the level of consciousness in normals was manifested by an increase in fatigue, in a desire to sleep, and a decrease in insight. - page 46

85% of normals show an increase in systolic pressure after atropine
81% of acute schizos show a decrease in " " "
63% of chronic schizos " " " " " " "

(over)

Schizophrenia Research in Saskatchewan
Project 607-5-135 (Three-Year Report)
Project 607-7-12 and 607-5-135 (1954 Annual Report)

AIBI 75-153

SOUND (General Comments)

It appears to be well established that harmonious sound (music) in certain industrial areas has markedly increased productive rates. Sound experts have told us that sound in the form of music or otherwise could also increase accidents, lower output and quite probably disrupt work almost completely or bring about a strike. Mood music or background music is a commercial reality at present. Very intense sound or highly distracting sounds promote anxiety, nervous tension, instability and if carried to extremes can cause physical damage. Whether or not sound can be used in the A techniques is unknown but the effects of sounds (within or above or below the human range) might be a worthwhile subject for advanced study although cost would probably be high.

We believe that monotonous sounds have somewhat of a hypnotic effect. We have reports of psychiatrists using slowly timed metronomes to assist in hypnotic induction. The effects of drums or tom-toms may be along these lines. One specialist in accoustics believes that sleep could be induced by sound.

There is some information available that high-pitched sounds, generated continuously in a confined area tend to lower the resistance to suggestion or possibly have a sedative quality. This information is not confirmed by acceptable authority. It could, however, be fairly easily tested.

A

A SOUND

communicated that he observed certain interesting effects during AUDIOMETER tests on himself at Walter Reed. He stated that he observed high pitched sound - - - & exact the apparent sensation of sound in his ears for some time after the sounds had been in fact cut off by the operator of the testing device.

A/BE 75-155

SCOPOLAMIN.

Mixture of alkaloids, chiefly Scopolamin (which see) and Atropin.

See also: Narcotizing Drug Combinations

BI 75-157

SUBJECT'S PERSONALITY (1

The out-dated typing of persons as Introvert & Extrovert, while oversimplified, is useful.

Roughly, the Introvert is the lean thinker, self-absorbed & self-critical, interested in fine detail. The Extrovert is the better-fed doer, the outgoing friendly fellow with high self-confidence and low opinion of fine detail. The Average man has some introvert traits, some extravert, and some indistinguishable.

More exact — and more complicated — is a three-way instead of a two-way scheme. Again roughly, it describes cerebral, visceral, and muscular types: several such classifications.

For our purposes, the INTROVERT-EXTRAVERT classification will do.

Introvert Types tend to be:	Extravert Types
1. Better able to pursue two ideas or purposes at one time.	1. More one-track-minded.
2. Less easily diagnosed as to emotional feelings — emotions are more mixed, & less openly expressed.	2. More consistent in emotions — i.e., more whole-heartedly nonchalant, fearful, angry, &c, at any one time.
3. More compulsive — i.e., more determined in a narrow course of action, and less able to shift promptly & consistently to a different and more expedient course.	3. More responsive to the Operator's mood.
4. Probably more responsive to some drugs -- a moot point. Certainly not true for all drugs.	4. More easily hypnotized.
5. More interested in tobacco.	5. More interested in food.

SUBJECT'S PERSONALITY

There is plenty of literature that would be applicable in suiting Means to Personality - the Subject's, and also the Op.'s. This reporter has not studied it closely enough to add further suggestions to the page preceding.

Experienced Operators learn by practice what Means are the more effective for a given S. Their rough appraisal will be more useful than the elaborations of a formal assessment. Corrections of the moment, to vary a Means or go on to another one, may be required.

Generally, heavier and older Subjects take higher doses of drugs for effectiveness. Chronic alcoholics require heavier doses of sleep-producing drugs to attain sleep. To a S. already under the influence of alcohol, other drugs' addition must be regulated accordingly (those that then become more powerful or dangerous, are referred to elsewhere in these cards).

Further study of the suiting of Means to S's Personality, is recommended.
" " " combinations of other drugs with alcohol, " " more strongly.

Personality is referred to also under Adrenalin (which see)

HBE 75-158

SURGICAL LOBOTOMY See Lobotomy

A/BI 75-159

Taming see
- Lobotomy
- Rauwolfia
- Chlorpromazine

Temperature Changes see
- Heat
- Cold

A/BE 75-160

Tetraethylammonium

Either Oblivon (Methylpentynol), or Tetraethylammonium chlorid, in small dosage, by mouth, will reduce anxiety. Effect is relatively mild.

Since anxiety-reduction alone seems to have limited usefulness, further search of the literature in this connection seems unwarranted at the moment.

A/BE 75-161

TETRAHYDROCANNABINOL	See Unwitting Subject
THORAZINE	See Chlorpromazine
THRESHOLD	See Convulsive Threshold Lowered Convulsive Threshold Raised

A/BI 75-162

TOBACCO
(which see)

1. Nicotin/is not a Means (to produce a Mental State), although it may produce one that is undesirable, viz.: it heightens the subjective sensations of alcoholic intoxication, making a Subject feel more drunk than he is. We would prefer him to feel less drunk.

2. Tobacco is noted here as a vehicle for other Means:

   a) for LSD25. (See Unwitting Subject)

   b) for Potassium Chlorate (which see).

TOLSEROL See Myanesin

TOPECTOMY See Lobotomy

TOXIC See Animal
TOXINS Bacterial Toxins
Fungus
Plant

TRANSORBITAL LOBOTOMY See Lobotomy

AIDE 75-164

TRACER TECHNIQUES

The use of certain types of liquids and solids which can be traced in their passage through the human body is well known. We have been advised that either at the Massachusetts General Hospital or in one of the Harvard units that there was a very advanced unit being developed for the tracing of radio-active material throughout the human body and particularly in the brain. It is also believed that advanced work along these lines has been done at Mayo and Johns Hopkins. Some of the large drug and chemical manufacturing companies are also working in this field.

We have received information from competent people that almost any element can be made "active" in some way or another and its passage throughout the body and to the brain can be observed.

Our information concerning the equipment to conduct tracer tests is to the effect that the equipment is bulky and quite expensive.

Along these lines, several of our most important consultants have constantly urged exploration of the tracer techniques as a method of advancing ARTICHOKE studies.

A

A/BI 75-165

TWILIGHT SLEEP

See Narcotizing Drug Combinations, & Narco-Analysis.

No conclusion has been reached here, on whether a barbiturate + an amphetamin is generally superior to a belladonna derivative or relative + an opiate. I am inclined to favor the former; possibly because of some psychiatric experience with it, and none with the scopolamin/morphin team.

Besides the latter, stramonium with morphin; or, either stramonium or scopolamin with heroin: the less familiar combinations like these should of course be first sought out in the literature. Piule (which see) might be tried.

Most important would be, to leave out the opiate — provided the authorities say nothing against this plan. Using the opiate and omitting the belladonna, would certainly be far less useful than the other way around; this I would recommend against.

Omitting the opiate and using the scopolamin, has another variant recommended in the literature: instead of scopolamin alone, one authority (one whose report I can take at par) used scopochloralose with most satisfactory results of interrogation.

A/BE 75-166

ULTRASONICS

Two windows, each an inch in diameter, must be cut through the top of the skull. An applicator cup that transmits the ultrasonic beam, is placed on the membrance that covers the brain. The beam of high intensity ultra-sound waves (far beyond the range of hearing), is aimed and concentrated through lenses: direct, 5 min.; then sweeping, 7 min. A lobotomy (which see) effect is obtained, resembling a localized concussion of the frontal lobes.

Though improbable, it is possible that a temporal approach (instead of the present vertical approach) will eventually be devised without the cutting of a hole in the skull. Now, and then too, some of the lobotomy-effect is temporary, some permanent. Modifications in techniques that use Ultrasonic energy should be followed for our purposes. It may be that not only frontal lobes, but temporal lobes, amygdaloid nuclei, sleep-centers, etc., can eventually be usefully stimulated without being destroyed, by Ultrasonics.

A/S I 75-167

UNWITTING SUBJECTS

The problem of how to effect control of a subject by the use of hypnosis or chemicals or a combination thereof, without the subject being aware that he is being approached ([redacted]), is one of the most interesting and complex problems studied by the ARTICHOKE group. This approach could (can) be made through any of the following techniques:

a) The subject who is brought under H control by the use of the indirect techniques (relax-rest or possibly monotonous sounds, etc.).

b) The subject who falls under H control by accident.

c) Use of "medical cover" for:
   1) Narco-interrogation and control;
   2) Narco-hypnotic interrogation and control.

d) Use of surreptitious agents
   1) Concealable chemicals
   2) Odorless gases or aerosols
   3) Dusts
   4) Possible deprivation of oxygen or food

e) By-products of medical treatment
   1) Shock therapy
   2) Medical pre-conditioning with chemicals, etc.
   3) Medical treatment for illness or accident
   4) Psycho-analysis or psycho-therapy

Certain comments can be made in connection with the above categories: (2

a) The A group has experimentally placed a great number of individuals under hypnosis by the indirect technique, but it is doubted if this would apply to hardcore-agent types done on individual basis although it is possible that it might be done disguised as some type of group activity or entertainment.

b) In the A experimentation, we have noted a number of people who have been placed in hypnotic trances by accident. Again it is doubted if this could be done directly against a hardcore or intelligent type. It might be done through some type of group activity or entertainment. For the record, it should be noted that this has not yet been attempted against personnel of interest to us from an operations point of view.

c) At the present time, the use of a carefully laid on medical cover to obtain either a narco-interrogation or narco-hypnotic interrogation appears to be the best weapon presently available. It is not necessary to go into detail as to how this is done but experience indicates it is our best technique.

d) Always linked to the problem of the unwitting subject is the technique of giving a chemical in any form to the subject without his knowledge. Many gadgets and ideas have been considered. Micropellets, substances that can be concealed in common liquids, odorless gases, electric currents, magnetic currents, dusts, aerosols, etc., but each one of these presents a difficult problem. At present, the closest approach appears to be a potent, tasteless, odorless chemical such as LSD but at the present time the value of these chemicals in interrogation or control work is very, very uncertain.

It seems pertinent to comment that the ARTICHOKE group feels that by depriving subjects of food over a considerable period of time, the will to resist can gradually be worn down. This appears to be part of the Communist brainwashing technique which we have been able to observe from our examination of the P.O.W.'s in Korea. The A group feels that food deprivation and possibly oxygen deprivation if carried on over a long period of time might be valuable in these techniques, but this would call for extensive research and in the case of oxygen deprivation specially built interrogation chambers which would possibly rule out this approach.

e) The A group feels that possibly chemical or hypnotic control could be induced as a by-product of certain parts of medical treatment such as elecctro-shock or by placing of an individual under medical prescription over a considerable period of time. Certainly an ideal approach could be made to any subject if that subject had offered himself for or was taking psychoanalysis. This is a very strong reason for prohibiting Agency personnel overseas from being treated in any way except by fully authorized physicians, psychiatrists or company doctors.

Closely coupled with the above is the related problem: if a subject can successfully and unwittingly be approached and rendered either unconscious or hypno- or narco-controlled, how can his memory be made blank for events leading up to the coma or trance and for what transpired while under control and/or possibly extending throughout the "hangover" period after he awakens. Ideally, control of the subject obtained without his knowledge or consent and followed by a total amnesia is the goal but at the present time this appears impossible. Much research and experimentation is necessary to achieve

these ends and as stated above, for the present at least a smooth, carefully designed medical cover appears the best approach. (See also Amnesia)

Finally some words should be noted in regard to the use of chemicals (or hypnosis in some ways for that matter) which complicate the problem of the unwitting subject--and in a large sense recommend the use of medical cover.

a) Certain chemicals such as LSD, mescaline, cannabis, opium produce bizarre, weird and startling effects. A person experiencing these effects would recognize this and undoubtedly suspect something unusual had occurred to him.

b) Most chemicals, in effective dosages, carry some type of hangover. This can take the form of confusion, nausea, illness, sweating, headache, tremors, or combinations of these, etc. Again, a subject would suspect the reason.

c) Human beings do not respond in identical ways to identical dosages of chemicals. A dose that may have no noticeable effect on one subject might produce a convulsion or even death in another. The best results are always obtained in using chemicals by competent medical personnel using special knowledge of chemical reactions. A subject in a coma is useless for interrogation or control and an underdose may blow an operation.

d) Under the Heading AMNESIA, we commented on attempts to produce amnesias on hypnotic subjects. For the record, it should also

be noted that quite often a hangover effect is felt from deep hypnosis. The ARTICHOKE group has seen subjects emerging from hypnosis effected in the following ways:

1) Illness--including nausea, headache, sweating.
2) Psychological reactions--fear, hysteria, confusion, disorientation.
3) Extreme fatigue, tendencies to return to sleep states, feeling of weakness.

Hence, even if a good amnesia is developed, a subject could certainly suspect he had been subjected to something unusual.

A

A/B E-75-168

UNWITTING SUBJECT: If Operator could surely produce prompt sleep, without a hypodermic. (1

Enough CO_2 in the room could produce sleep rapidly, but	S. would later recall having fallen asleep.	Unknown how surely to keep Op. awake. Also, a fixed installation required? Possibly, any room would do.
Enough Dormison (about tasteless in food or drink), Chloral (disguisable by alcohol), or Seconal (possibly disguisable, not tasteless), produces sleep,	but S. would later recall the circumstances.	
If S. had earlier been hypnotized deeply enough by the same Op., and given post-hypnotic suggestion to fall asleep instantly on a simple signal (like Op. snapping fingers), for some time thereafter he would do so.	Rarely can a S. be hypnotized unwittingly; and if so, probably not deep enough. Also, such suggestion's duration is unknown.	Hypnotic sleep is not genuine sleep. All happenings in it can be recalled thereafter — more or less of it by the S. consciously, and the rest by another Op.'s hypnosis or analysis.

If Operator could surely produce epileptic fit, without a hypodermic.

If S. sensitized enough by appropriate drug by mouth, flickering light convulses. See Flicker.	Metrazol or Isoniazid orally is toxic or nauseating in such doses, & not tasteless. Combination with other drugs must be sought; also, possible safe & effective aerosols or gaseous sensitizers.	Op. can probably be protected by other drugs.

(See also: ELECTRIC SHOCKS.)
RADIANT ENERGY.)

Methedrin or Dexedrin (probably disguisable by most drinks) Methedrin + barbiturate (may be disguisable) Other possible combinations by mouth			Under questioning, S. tends to reveal
LSD25 in drink (very small dose, tasteless)			
Ordinary cigarette with filter tip, whose edge has been wiped with LSD25	Extremely unsure dosage. QQ: how to apply a small enough dose to the tip, & how much will be licked & so absorbed by the S.		Effects peculiar to LSD25
Ordinary unfiltered cigarette to which .02 gm. Tetrahydrocannabinol acetate has been added;	stronger drugging may be exposed by "woozy" sensation.	Strong coumarin flavor (as Camels) required to mask marijuana taste	Under questioning, S. tends to reveal

(See also card on IONTOPHORESIS)

VERTIGO

See Barbiturate (also other drugs)
Equilibrium
Flicker Sickness
Middle Ear Disorder
Motion Sickness
Vibration

A/BZ 75-170

(1

VIBRATION

1. A rubber room that vibrated in several directions was reported used by Russians to produce overanxiety and emotional instability (columns numbered 2 and 3 of Mental States). Even the bouncing tendency of a soft rubber floor will produce some sense of insecurity; a famous piece of rubber pavement yars ago in Edinburgh was said to alarm and confuse pedestrians.

For our purpose a quaking room is too much of a torture chamber; however, if some third-degree approach is contemplated at a permanent installation, this one is interesting.

2. Less formidable would be some possible modification of the "Anatometer", exhibited this year at the American Psychiatric convention (illustrated and described in Section 26 of my report thereon). As manufactured, it is a padded table on which subject lies; it slides back and forth longitudinally, and is intended to make him calm, perhaps drowsy. Naturally it does not vibrate; but if vibration were added, and tipping and sliding were in the directions most conducive to motionsickness, an apparatus of this sort could be devastating to a subject's mental as well as physical equilibrium.

Again, too third-degree for any but exceptional use.

3. Another form of vibration is in relatively low-frequency sound waves, below the range of hearing. Frequencies below 2000 cycles per second cause a strong sense of vibration throughout the head; half an hour's exposure, at 145 to 150 decibels,

A/BL 75-171

VITAMINS
Effects on Intoxication, of Other Drugs (Before, With or After) Alcohol

ALCOHOL plus Vitamins A, B_1, B_2, and B_2-complex, and C: effects uncertain

Vitamin B_6 (Pyridoxin)--see Deprivations

Vitamin C (Pyridoxin)--see Prophylaxis against Revealing

WASHING See Brain Washing

A/BE 75-173

Induction, "disguised"

Author treats method of inducing hypnosis without apprising cooperative subject (patient) of condition desired (hypnosis) ascribing the desired end result as relaxation.

"I shall teach you to relax and concentrate." Seat subject in comfortable armchair. Subject is told to let all muscles go limp; head should be inclined slightly forward; arms should rest fully on chair arms with hands hanging limply over edge. Ask subject to fix gaze on thumb and forefinger of one of his hands. Then state, "I am going to ask you to close your eyes soon, but continue to concentrate on your thumb and forefinger. As you concentrate, I shall count and as I count you will become more and more relaxed. As you do so, you will feel your thumb and forefinger draw closer and closer together. When they touch, you will then know you are in a deep state of relaxation."

Synchronize count with respirations and continue indefinitely. Repeat the directions re feeling more relaxed and re Apposition of thumb and forefinger as count reaches 100, and continue. After x repeats add that "as your state of relaxation becomes more and more complete your arm will rise to touch your forehead, etc."

Adler, M.H. and Secunda, L.
Indirect technique to induce hypnosis
Journal of Nervous and Mental Diseases
Vol. 106, pp 190-193, August 1947

A/BE 75-174

Induction

Subjects who prove refractory to the induction of hypnosis may be rendered more susceptible by being placed in the hypnogogic state through use of drugs and then being instructed that they could enter a similar state the next time the operator attempted verbal hypnosis. (Wolberg 1948)

Baernstein (1928) found scopolamine hydrobromide use resulted in heightened susceptibility to suggestion 100% of time. (Thesis, University of Wisconsin, 1929)

Wilson (1927) reports that by the breathing of a mixture of nitrous oxide and air, nitrous oxide and oxygen, a perfectly suggestible state may be produced without loss of consciousness.

Gorton, Bernard E. - Physiology of Hypnosis
Psychiatric Quarterly Vol. 23: 457-485, July 1949

A/B I 75-175

BMR

The basal metabolic rate is decreased by 10% in sleep. It is not affected by hypnosis.

Anxiety or apprehension increases the BMR. Elation, depression, or irritability do not affect the BMR.

Some say rate of breathing is same in sleep and hypnosis; some say rate of breathing is decreased in hypnosis.

Hypeventilation causes an alkalosis which causes vagotonic action which causes sleep.

GORTON, Bernard E. - Physiology of Hypnosis
Psychiatric Quarterly, Vol. 23, pp 317-343, April 1949

A/BE 75-176

Physiology

Pavlov's is the most comprehensive explanation of the physiology of hypnosis ever devised. He equated inhibition, ordinary sleep and hypnosis with one another, but has been proved erroneous by at least Hilgard and Marquis in 1940.

Conditioned reflexes are acquired with greater facility in the hypnotic than in the waking state.

P.C. Young has explanations for psychology of hypnosis.

GORTON, Bernard E. - Physiology of Hypnosis
Psychiatric Quarterly, Vol. 23, pp 317-343, April 1949 and
pp 457-485, July 1949

A/B-I 75-177

EKG

11/2/55

Unchanged in Hypnosis

Jenness

A/BI 75-178

Electroencephalography

There is no difference between cortical electrical activity on the EEG of a person in a deep hypnotic trance and that of the same person in the waking state.

Dynes, John B.
Archives of Neurology and Psychiatry
Vol. 57, pp 84-93, Jan. 1947

The electrical activity of the cerebral cortex is the same in waking and hypnotic states. Alpha waves disappear when the eyes are open. Loomis, et al, made alpha waves reappear by hypnotic suggestion of blindness with eyes taped open. Lundholm and Lowenback could not duplicate Loomis' finding. They and other investigators have found that hallucinations of audition and vision do not change the EEG. Emotional changes induced under hypnosis do change the EEG.

Gorton, Bernard E. - Physiology of Hypnosis
Psychiatric Quarterly, Vol. 23: pp 317-343, April 1949

AIBI 75-179

Pulse rate

11/2/55

Slight lowering in hypnosis

Goldwyn

Same as in waking state

Jenness

A/B I 75-180

Blood Pressure

11/2/55

Shows no constant changes

Goldwyn

Shows slight systolic rise

Jenness

A/BE 75-181

Respiration

Slight decrease in hypnosis

Goldwyn
Jenness

A/B E 75-182

BMR

11/2/55

With fifty-two subjects, all showed a decrease in BMR while under hypnosis.
Range of decrease was 0.6 - 8.3%
Average decrease was 3.88%

A/BE 75-183

Prediction of Hypnotizability 15 November 1955

PREDICTION OF HYPNOTIC SUSCEPTIBILITY FROM A KNOWLEDGE OF SUBJECT'S ATTITUDES

Prediction was based on subject's reaction by introducing a picture of hypnosis into the Thematic Apperception Test (See Morgan, C.D. and Murray, H.A., Arch. Neurol. Psychiat. 1935, 34:289-306). In this test the subject is shown a series of pictures and asked in each case to make up a story for which the pictures might serve as an illustration. He could scarcely obey this instruction in regard to the hypnosis picture without revealing some attitude toward hypnotism or at least some notion of its nature.

Two other factors are *N*-Deference and *n*-Affiliation (n= need for). In their everyday behavior they are much inclined:

(a) to find and follow leaders, gladly yielding to their influence, and

(b) to seek the company of friendly persons, endeavoring to please them and win their affection.

A/BI 75-184-

Skin Resistance

11/2/55

Subjects who achieve lethargic state show lowered skin resistance.

Subjects who achieve active state show no change in skin resistance from waking state.

Davis

A/B I 75-185

Suggestibility

Earliest test of suggestibility was the hypnoscope employed by Ochorowicz in 1887. A steel magnet, bent in the form of a ring, was placed on the subject's finger. Susceptible individuals experienced a sensation of numbness and stiffness, and sometimes the finger became stiff and immovable. Ochorowicz believed this to be the result of suggestion, and he judged such subjects to be amenable to hypnotic treatment.

Arcieri, Libero
Differences in the Degree of Susceptibility
Psychiatric Quarterly Vol. 23, pp 41-58, 1949

A/BI 75-186

Suggestibility

11/2/55

Readiness to confide is most
direct index of suggestibility

Bartlett

AHOI 75-187

Narcoanalysis--

Contraindications for narcoanalysis--

1) Old age - an indication for smaller dose
2) Nephritis - long acting barbiturates should not be used
3) Liver disease - this is main contraindication
4) Advanced cardiovascular disease - doses should be small and infrequent
5) Any tendency to respiratory spasm is an indicator for special caution
6) Toxemia - an indication for caution - nevertheless, the barbiturates if used with discrimination are of undoubted value in states of toxemia and exhaustion.

A/BI 75-188

Dicarbamate Compounds also termed Meprobamates

Miltown
2-methyl-2-n-propyl-1, 3 propanediol dicarbamate
400 mg. tablets
Wallace Laboratories
Division of Carter Products, Inc.
New Brunswick, New Jersey

Equanil
2-methyl-2-n-propyl-1, 3 propanediol dicarbamate
400 mg. tablets
Wyeth
Philadalphia, Pennsylvania

A/BI 75-189

Equanil

One of a group of chemically unrelated drugs that promote equanimity known as ataraxics.

Oral, muscle relaxant, no autonomic effects.

Usual equanimity producing dose - one 400 mg. tablet after each meal and one at bedtime (Q.I.D.) (One acutely tense patient required double this dose for three weeks before dosage reduction.) The dose is reduced and withdrawn as soon as possible.

"Patients with whom the physician could not obtain rapport...became more responsive to suggestion, to hypnosis, and to free association (conversational or discursive) therapy. Equanil brought about a feeling of ease and relaxation which increased the patients confidence in the physician and broke down his emotional defenses."

Adverse effects: 3 in 187 patients

Fainting and hyperthermia (102) 2½ hours after 800 mg.

Angioedema after six days.

Urticaria after four days.

Overdosage - In two cases of overdosage (20 Gm. and 40 Gm in less than twenty-four hours) black coffee and constant movement for two hours permitted recovery and subsequently normal sleep.

Equanil is not habit forming.

It relaxes the patient for natural sleep rather than forcing sleep.

(over)

Selling, L.S: JAMA 157:1594, 30 April 1955
Borrus, J.C. JAMA 157:1596, 30 April 1955

A/Bz-75-190

Hallucinogens

Most of known hallucinogens are indoles. These include lysergic acid diethylamide, harmine, ibogaine, yohimbine, bufotenine. (Mescaline is not an indole but has the possibility of forming indoles.) Indoles in the body are formed endogenously from tryptophane and adrenalin-like compounds. As indole compounds, most of known hallucinogens are related to adrenochrome and its precursor adrenaline.

A/BC 75-191

LSD

Subjects presenting symptoms of free floating anxiety and high blood pressure have a markedly atypical reaction to LSD, p. 35

Schizophrenia Research in Saskatchewan
Project 607-5-135 (Three-Year Report)

- A/BI 75-192

Prevention of Psychosis

The gamma isomer of Meratran, alpha-(4-pideridyl) benzhydrol hydrochloride, may inhibit psychotic behavior. Hallucinations, delusions, and dissociation syndromes, which usually appear in healthy individuals after ingestion of lysergic acid diethylamide, are prevented by premedication with the Meratran isomer, reports Dr. Howard D. Fabing of Cincinnati. When no premedication is given, the psychotic state can be rapidly terminated by intravenous administration of the blocking agent.

Science 121:208-210, 1955

A/BI 75-193

Biological and Psychological Effects of Ultrasonics
by Hallowell Davis
Journal of the Acoustical Society of America, Vol. 20, No. 3, pps 605-607, September 1948

Ultrasonics Panel of the Aeronautical Board* should be made a clearing house for all reasonably controlled biological and psychological effects that are observed systematically or incidentally by those working with high frequency or high intensity "sonics".

*Chairman, H. Davis - Central Institute for the Deaf, St. Louis
Secretary, H.O. Parrack - Aero Medical Laboratory, Wright Field, Dayton, Ohio